

**USDA/NRCS/VA FY15 State-wide Average Cost (typical average cost to install conservation practices and associated average annual costs) for Conservation Practices used in Virginia**

Price base: September/October 2014

No. of Scen- ar- ios	Prac- tice Code	Practice Name	Practice Scenario	Units	Estimated Average Cost/Unit	Typical Units Installed	Estimated Total Installation Cost (rounded)	Assumed Practice Lifespan in Years	Estimated Average Annual Cost (amor- tized practice cost) <sup>1/</sup>
<b>CAP102 Comprehensive Nutrient Management Plan</b>									
1	102	Comprehensive Nutrient Management Plan	Non-Dairy Operation Less Than 300 AU with Land Application	Number	\$4,585	1	\$4,600	1	\$4,700
2	102	Comprehensive Nutrient Management Plan	Dairy Operation Less Than 300 AU with Land Application	Number	\$4,800	1	\$4,800	1	\$4,900
3	102	Comprehensive Nutrient Management Plan	Non-Dairy Operation Greater Than or Equal to 300 AU and Less Than 700 AU with Land Application	Number	\$6,100	1	\$6,100	1	\$6,300
4	102	Comprehensive Nutrient Management Plan	Dairy Operation Greater Than or Equal to 300 AU and Less Than 700 AU with Land Application	Number	\$6,300	1	\$6,300	1	\$6,500
5	102	Comprehensive Nutrient Management Plan	Non-Dairy Operation Greater Than or Equal to 700 AU with Land Application	Number	\$6,800	1	\$6,800	1	\$7,000
6	102	Comprehensive Nutrient Management Plan	Dairy Operation Greater Than or Equal to 700 AU with Land Application	Number	\$7,000	1	\$7,000	1	\$7,200
7	102	Comprehensive Nutrient Management Plan	Livestock Operation Less Than 300 AU without Land Application	Number	\$2,800	1	\$2,800	1	\$2,900
8	102	Comprehensive Nutrient Management Plan	Livestock Operation Greater Than 300 AU without Land Application	Number	\$3,600	1	\$3,600	1	\$3,700
<b>CAP104 Nutrient Management Plan</b>									
1	104	Nutrient Management Plan	Nutrient Management CAP Less Than or Equal to 100 Acres (Not part of a CNMP)	Number	\$2,200	1	\$2,200	1	\$2,300
2	104	Nutrient Management Plan	Nutrient Management CAP 101 - 300 Acres (Not part of a CNMP)	Number	\$2,900	1	\$2,900	1	\$3,000
3	104	Nutrient Management Plan	Nutrient Management CAP Greater Than 300 Acres (Not part of a CNMP)	Number	\$3,700	1	\$3,700	1	\$3,800
4	104	Nutrient Management Plan	Nutrient Management CAP Less Than or Equal to 100 Acres (Element of a CNMP)	Number	\$3,700	1	\$3,700	1	\$3,800
5	104	Nutrient Management Plan	Nutrient Management CAP 101 - 300 Acres (Element of a CNMP)	Number	\$5,100	1	\$5,100	1	\$5,300
6	104	Nutrient Management Plan	Nutrient Management CAP Greater Than 300 Acres (Element of a CNMP)	Number	\$6,200	1	\$6,200	1	\$6,400
<b>CAP106 Forest Management Plan</b>									
1	106	Forest Management Plan	FMP Less Than or Equal to 20 acres	Number	\$1,300	1	\$1,300	1	\$1,340
2	106	Forest Management Plan	FMP 21 to 100 acres	Number	\$1,700	1	\$1,700	1	\$1,750
3	106	Forest Management Plan	FMP 101 to 250 acres	Number	\$3,000	1	\$3,000	1	\$3,090
4	106	Forest Management Plan	FMP 251 to 500 acres	Number	\$4,300	1	\$4,300	1	\$4,430
5	106	Forest Management Plan	FMP 501 to 1,000 acres	Number	\$5,000	1	\$5,000	1	\$5,150
6	106	Forest Management Plan	FMP Greater Than 1000 acres	Number	\$6,200	1	\$6,200	1	\$6,390
<b>CAP108 Feed Management Plan</b>									
1	108	Feed Management Plan	Feed Management Plan Less Than 100 Acres	Number	\$1,200	1	\$1,200	1	\$1,240
2	108	Feed Management Plan	Feed Management Plan 100 to Less Than 1,500 Acres	Number	\$3,100	1	\$3,100	1	\$3,190

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3	108	Feed Management Plan	Feed Management Plan 1,500 - 5,000 Acres	Number	\$5,200	1	\$5,200	1	\$5,360
4	108	Feed Management Plan	Feed Management Plan Greater Than 5,000 Acres	Number	\$6,600	1	\$6,600	1	\$6,800
<b>CAP110 Grazing Management Plan</b>									
1	110	Grazing Management Plan	Grazing Management Plan Less Than 100 Acres	Number	\$1,200	1	\$1,200	1	\$1,240
2	110	Grazing Management Plan	Grazing Management Plan 100 to Less Than 1,500 Acres	Number	\$3,100	1	\$3,100	1	\$3,190
3	110	Grazing Management Plan	Grazing Management Plan 1,500 - 5,000 Acres	Number	\$5,200	1	\$5,200	1	\$5,360
4	110	Grazing Management Plan	Grazing Management Plan Greater Than 5,000 Acres	Number	\$6,600	1	\$6,600	1	\$6,800
<b>CAP112 Prescribed Burning Management Plan</b>									
1	112	Prescribed Burning Management Plan	Prescribed Burning Plan Less Than or Equal to 20 Acres	Number	\$350	1	\$350	1	\$360
2	112	Prescribed Burning Management Plan	Prescribed Burning Plan 21-100 Acres	Number	\$550	1	\$550	1	\$570
3	112	Prescribed Burning Management Plan	Prescribed Burning Plan 101-250 Acres	Number	\$830	1	\$830	1	\$850
4	112	Prescribed Burning Management Plan	Prescribed Burning Plan 251-500 Acres	Number	\$1,100	1	\$1,100	1	\$1,130
5	112	Prescribed Burning Management Plan	Prescribed Burning Plan 501-1,000 Acres	Number	\$1,400	1	\$1,400	1	\$1,440
6	112	Prescribed Burning Management Plan	Prescribed Burning Plan Greater Than 1,000 Acres	Number	\$1,700	1	\$1,700	1	\$1,750
<b>CAP114 Integrated Pest Management Plan</b>									
1	114	Integrated Pest Management Plan	IPM Management CAP Small-Specialty Less Than 50 Acres	Number	\$1,800	1	\$1,800	1	\$1,850
2	114	Integrated Pest Management Plan	IPM Management CAP Medium 51 - 250 Acres	Number	\$2,400	1	\$2,400	1	\$2,470
3	114	Integrated Pest Management Plan	IPM Management CAP Large - Greater Than 250 Acres	Number	\$3,700	1	\$3,700	1	\$3,810
<b>CAP118 Irrigation Water Management Plan</b>									
1	118	Irrigation Water Management Plan	Irrigation Water Management Conservation Activity Plan CAP	Number	\$3,100	1	\$3,100	1	\$3,190
<b>CAP128 Agricultural Energy Management Plan-Headquarters (AgEMP)</b>									
1	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock Small Less Than 70 AU	Number	\$1,600	1	\$1,600	1	\$1,650
2	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock Medium 70 - 300 AU	Number	\$2,100	1	\$2,100	1	\$2,160
3	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock Large 301 - 2,500 AU	Number	\$2,600	1	\$2,600	1	\$2,680

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4	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock Extra Large Greater Than 2,500 AU	Number	\$3,400	1	\$3,400	1	\$3,500
5	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Small < 70 AU, plus 1 non-Livestock Enterprise, no irrigation involved	Number	\$2,800	1	\$2,800	1	\$2,880
6	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Medium 70-300 AU, plus 1 non-livestock enterprise, no irrigation involved	Number	\$3,300	1	\$3,300	1	\$3,400
7	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Large 301-2500 AU, plus 1 non-Livestock Enterprise, no irrigation involved	Number	\$3,800	1	\$3,800	1	\$3,910
8	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Extra Large >2,500 AU, plus 1 non-Livestock Enterprise, no irrigation involved	Number	\$4,600	1	\$4,600	1	\$4,740
9	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Small < 70 AU, plus 1 non-Livestock Enterprise, irrigation involved	Number	\$5,500	1	\$5,500	1	\$5,670
10	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Medium 70-300 AU, plus 1 non-livestock enterprise, irrigation involved	Number	\$6,000	1	\$6,000	1	\$6,180
11	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Large 301-2500 AU, plus 1 non-Livestock Enterprise, irrigation involved	Number	\$6,600	1	\$6,600	1	\$6,800
12	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Livestock - Extra Large >2,500 AU, plus 1 non-Livestock Enterprise, irrigation involved	Number	\$7,500	1	\$7,500	1	\$7,730
13	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Greenhouse, Aquaculture, or Other Single Enterprise, no irrigation involved	Number	\$2,600	1	\$2,600	1	\$2,680
14	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Greenhouse, Aquaculture, or Other with one additional Enterprise, no irrigation involved	Number	\$3,500	1	\$3,500	1	\$3,610
15	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	AgEMP Greenhouse, Aquaculture, or Other with one additional Enterprise, irrigation involved	Number	\$4,700	1	\$4,700	1	\$4,840
16	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Small, Less Than 50 acres	Number	\$1,900	1	\$1,900	1	\$1,960
17	128	Agricultural Energy Management Plan- Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Medium, 50 to 499 acres	Number	\$2,400	1	\$2,400	1	\$2,470

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18	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Large, 500 to 5,000 acres	Number	\$2,900	1	\$2,900	1	\$2,990
19	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Extra Large, Greater Than 5,000 acres	Number	\$2,900	1	\$3,900	1	\$4,020
20	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated Small, Less Than 50 acres	Number	\$4,300	1	\$4,300	1	\$4,430
21	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated Medium, 50 to 499 acres	Number	\$5,500	1	\$5,500	1	\$5,670
22	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated Large, 500 to 5,000 acres	Number	\$7,200	1	\$7,200	1	\$7,420
23	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated, Extra Large, Greater Than 5,000 acres	Number	\$7,500	1	\$3,900	1	\$4,020
24	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated Small, Less Than 50 acres, plus one additional enterprise	Number	\$5,400	1	\$5,400	1	\$5,560
25	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated Medium, 50 to 499 acres, plus one additional enterprise	Number	\$6,600	1	\$6,600	1	\$6,800
26	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated Large, 500 to 5,000 acres, plus one additional enterprise	Number	\$8,300	1	\$8,300	1	\$8,550
27	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Field Crops, Fruits/Vegetables, or Nursery, Irrigated, Extra Large, Greater Than 5,000 acres, plus one additional enterprise	Number	\$8,600	1	\$3,900	1	\$4,020
28	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Small, Less Than 50 acres, with one additional enterprise	Number	\$3,000	1	\$3,000	1	\$3,090
29	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Medium, 50 to 499 acres, with one additional enterprise	Number	\$3,500	1	\$3,500	1	\$3,610
30	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Large, 500 to 5,000 acres, with one additional enterprise	Number	\$4,100	1	\$4,100	1	\$4,220
31	128	Agricultural Energy Management Plan-Headquarters (AgEMP)	Non-Irrigated Field Crops, Fruit and Vegetable or Nursery Enterprise, Extra Large, Greater Than 5,000 acres, with one additional enterprise	Number	\$5,000	1	\$3,900	1	\$4,020

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<b>CAP130 Drainage Water Management Plan</b>									
1	130	Drainage Water Management Plan	DWMP - Tile Map Available	Number	\$2,600	1	\$2,600	1	\$2,680
2	130	Drainage Water Management Plan	DWMP - No Tile Map Available	Number	\$3,100	1	\$3,100	1	\$3,190
<b>CAP138 Conservation Plan Supporting Organic Transition</b>									
1	138	Conservation Plan Supporting Organic Transition	Conservation Plan Supporting Organic Transition CAP	Number	\$3,000	1	\$3,000	1	\$3,090
2	138	Conservation Plan Supporting Organic Transition	Conservation Plan Supporting Organic Transition CAP No Local TSP	Number	\$4,700	1	\$4,700	1	\$4,840
<b>CAP142 Fish and Wildlife Habitat Management Plan</b>									
1	142	Fish and Wildlife Habitat Management Plan	Fish and Wildlife Habitat Management CAP	Number	\$3,200	1	\$3,200	1	\$3,300
<b>CAP146 Pollinator Habitat Enhancement Plan</b>									
1	146	Pollinator Habitat Enhancement Plan	Pollinator Habitat Enhancement Plan CAP	Number	\$3,200	1	\$3,200	1	\$3,300
2	146	Pollinator Habitat Enhancement Plan	Pollinator Habitat Enhancement Plan CAP - No Local TSP	Number	\$4,600	1	\$4,600	1	\$4,740
<b>313 Waste Storage Facility</b>									
1	313	Waste Storage Facility	Earthen Storage Facility less than 50K ft <sup>3</sup> Storage	Cu.Ft.	\$0.31	25,000	\$7,750	15	\$650
2	313	Waste Storage Facility	Earthen Storage Facility greater than 50K ft <sup>3</sup> Storage	Cu.Ft.	\$0.24	168,000	\$40,320	15	\$3,380
3	313	Waste Storage Facility	Drystack, earthen floor, wood walls (roof not included, see 367 Roofs & Covers for roof costs)	Sq.Ft.	\$1.79	4,000	\$7,160	15	\$600
4	313	Waste Storage Facility	Dry stack, earthen floor, concrete walls (roof not included, see 367 Roofs & Covers for roof costs)	Sq.Ft.	\$7.71	4,000	\$30,840	15	\$2,580
5	313	Waste Storage Facility	Dry Stack, concrete floor, wood walls (roof not included, see 367 Roofs & Covers for roof costs)	Sq.Ft.	\$3.96	4,000	\$15,840	15	\$1,330
6	313	Waste Storage Facility	Dry Stack, concrete floor, concrete wall (roof not included, see 367 Roofs & Covers for roof costs)	Sq.Ft.	\$10.56	4,000	\$42,240	15	\$3,540
7	313	Waste Storage Facility	Tank, less than 5K cu.ft. of waste stored	Cu.Ft.	\$5.95	3,600	\$21,420	15	\$1,790
8	313	Waste Storage Facility	Tank, 5Kcu.ft.to 15Kcu.ft. of waste stored	Cu.Ft.	\$2.07	9,420	\$19,500	15	\$1,630
9	313	Waste Storage Facility	Tank, 15Kcu.ft.to 25Kcu.ft. of waste stored	Cu.Ft.	\$1.56	20,000	\$31,200	15	\$2,610
10	313	Waste Storage Facility	Tank, 25K to 50K cu.ft. of waste stored	Cu.Ft.	\$1.57	28,000	\$43,960	15	\$3,680

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11	313	Waste Storage Facility	Tank, 50Kto 75K cu.ft. of waste stored	Cu.Ft.	\$1.24	62,000	\$76,880	15	\$6,440
12	313	Waste Storage Facility	Tank 75Kto 110K cu.ft. of waste stored	Cu.Ft.	\$1.09	92,500	\$100,830	15	\$8,450
13	313	Waste Storage Facility	Tank, 110K cu.ft. of waste stored or greater	Cu.Ft.	\$0.99	152,600	\$151,070	15	\$12,650
<b>314 Brush Management</b>									
1	314	Brush Management	Mechanical, Hand tools	Acre	\$170	25	\$4,250	10	\$500
2	314	Brush Management	Mechanical, light Infestation	Acre	\$160	30	\$4,800	10	\$560
3	314	Brush Management	Mechanical, medium Infestation	Acre	\$210	30	\$6,300	10	\$740
4	314	Brush Management	Mechanical & Chemical	Acre	\$240	30	\$7,200	10	\$840
5	314	Brush Management	Chemical, Individual Plant Treatment	Acre	\$90	30	\$2,700	10	\$320
6	314	Brush Management	Chemical - ground applied	Acre	\$60	30	\$1,800	10	\$210
7	314	Brush Management	Mechanical - bush hog	Acre	\$40	10	\$400	1	\$410
8	314	Brush Management	Mechanical, cut down the treat stump with a herbicide	Acre	\$360	20	\$7,200	10	\$840
9	314	Brush Management	Mechanical, girdling followed by spraying with a herbicide	Acre	\$230	5	\$1,150	10	\$130
10	314	Brush Management	Disking of immature/small woody vegetation	Acre	\$18	10	\$180	1	\$190
11	314	Brush Management	Heavy Disking of immature/small woody vegetation	Acre	\$25	10	\$250	1	\$260
12	314	Brush Management	Rolling Drum Chopper	Acre	\$130	15	\$1,950	10	\$230
13	314	Brush Management	Spot Chemical Treatment of woody sites	Acre	\$80	15	\$1,200	10	\$140
14	314	Brush Management	Spot Chemical Treatment of pasture sites	Acre	\$85	15	\$1,280	5	\$280
15	314	Brush Management	Forestry Mulcher, ≤ 6 inch diameter woody material	Acre	\$545	15	\$8,180	10	\$960
<b>315 Herbaceous Weed Control</b>									
1	315	Herbaceous Weed Control	Mechanical	Acre	\$50	20	\$1,000	5	\$220
2	315	Herbaceous Weed Control	Mechanical and Chemical (cut then treat with herbicide to control re-growth)	Acre	\$105	20	\$2,100	5	\$460
3	315	Herbaceous Weed Control	Chemical, Spot (20% of each acre assumed to be treated)	Acre	\$15	20	\$300	5	\$70
4	315	Herbaceous Weed Control	Chemical, ground applied	Acre	\$60	20	\$1,200	1	\$1,240
5	315	Herbaceous Weed Control	Mechanical - bush hog	Acre	\$40	10	\$400	1	\$410
6	315	Herbaceous Weed Control	Disking of herbaceous vegetation	Acre	\$18	10	\$180	1	\$190
7	315	Herbaceous Weed Control	Sod conversion via herbicide application	Acre	\$50	15	\$750	5	\$160
9	315	Herbaceous Weed Control	Chemical control of Phragmites < 100 acres	Acre	\$370	25	\$9,250	5	\$2,020



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10	315	Herbaceous Weed Control	Chemical control of Phragmites > 100 acres	Acre	\$280	150	\$42,000	5	\$9,170
<b>316 Animal Mortality Facility</b>									
1	316	Animal Mortality Facility	Incineration, < 400 lbs. Capacity	Each	\$11,000	1	\$11,000	15	\$920
2	316	Animal Mortality Facility	Incineration 400 - 600 lbs. Capacity	Each	\$12,800	1	\$12,800	15	\$1,070
3	316	Animal Mortality Facility	Incineration > 600 lbs. Capacity	Each	\$14,600	1	\$14,600	15	\$1,220
4	316	Animal Mortality Facility	Static Pile, Earthen Pad	Sq.Ft.	\$0.70	2,500	\$1,750	15	\$150
5	316	Animal Mortality Facility	Static Pile, Concrete Pad	Sq.Ft.	\$2.95	5,700	\$16,820	15	\$1,410
6	316	Animal Mortality Facility	Freezer	Cu.Ft.	\$70	65	\$4,550	15	\$380
8	316	Animal Mortality Facility	Static Bin Composter	Sq.Ft.	\$18	945	\$17,010	15	\$1,420
9	316	Animal Mortality Facility	Small rotary Drum (270lbs. to 523lbs. of daily mortality capacity; plus an equal volume of carbon material)	Each	\$32,800	1	\$32,800	15	\$2,750
10	316	Animal Mortality Facility	Small rotary Drum (270lbs. to 523lbs. of daily mortality capacity; plus an equal volume of carbon material) with secondary composting storage area	Each	\$34,200	1	\$34,200	15	\$2,860
11	316	Animal Mortality Facility	Large rotary Drum (> 523lbs. of daily mortality capacity; plus an equal volume of carbon material)	Each	\$68,100	1	\$68,100	15	\$5,700
12	316	Animal Mortality Facility	Large rotary Drum (> 523lbs. of daily mortality capacity; plus an equal volume of carbon material) with secondary composting storage area	Each	\$71,800	1	\$71,800	15	\$6,010
13	316	Animal Mortality Facility	Composter with storage, nursery pigs, minimum of 60lbs.mortality/day	Lbs./Day	\$150	60	\$9,000	15	\$750
14	316	Animal Mortality Facility	Composter with storage, finisher pigs, minimum of 44lbs.mortality/day	Lbs./Day	\$410	44	\$18,040	15	\$1,510
15	316	Animal Mortality Facility	Composter with storage, sows, minimum of 34lbs.mortality/day	Lbs./Day	\$525	34	\$17,850	15	\$1,500
16	316	Animal Mortality Facility	Composter with storage, chickens, minimum of 141lbs.mortality/day	Lbs./Day	\$90	141	\$12,690	15	\$1,060
17	316	Animal Mortality Facility	Composter with storage, turkey, minimum of 67lbs.mortality/day	Lbs./Day	\$190	67	\$12,730	15	\$1,070
<b>317 Composting Facility</b>									
1	317	Composting Facility	Less than 500 Sq.Ft. concrete floor with wood or concrete walls	Sq.Ft.	\$12	448	\$5,380	15	\$450
2	317	Composting Facility	Greater Than or Equal to 500 Sq.Ft. concrete floor and wooden bin walls	Sq.Ft.	\$5.30	2,240	\$11,870	15	\$990
3	317	Composting Facility	500 Sq.Ft. or greater, concrete floor with concrete bin wall	Sq.Ft.	\$9.65	2,240	\$21,620	15	\$1,810
4	317	Composting Facility	Windrow, compacted earth floor	Sq.Ft.	\$0.30	32,670	\$9,800	15	\$820
5	317	Composting Facility	Windrow, concrete floor	Sq.Ft.	\$2.60	6,000	\$15,600	15	\$1,310

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<b>324 Deep Tillage</b>									
1	324	Deep Tillage	Less than 36 inches deep	Acre	\$33	40	\$1,320	1	\$1,360
<b>327 Conservation Cover</b>									
1	327	Conservation Cover	Introduced Species	Acre	\$210	10	\$2,100	5	\$460
2	327	Conservation Cover	Native Species	Acre	\$310	10	\$3,100	5	\$680
3	327	Conservation Cover	Native Grasses and Forbs	Acre	\$560	10	\$5,600	5	\$1,220
4	327	Conservation Cover	Native Shrubs, NWSGs and Forbs	Acre	\$530	10	\$5,300	5	\$1,160
5	327	Conservation Cover	Conventionally installed Pollinator Habitat	Acre	\$400	1	\$400	5	\$90
6	327	Conservation Cover	Organic Introduced Species	Acre	\$210	2	\$420	5	\$90
7	327	Conservation Cover	Organic Native Mix	Acre	\$400	2	\$800	5	\$170
8	327	Conservation Cover	Organic Native Shrubs, NWSGs and Forbs	Acre	\$600	1	\$600	5	\$130
9	327	Conservation Cover	Organic Pollinator Habitat	Acre	\$420	1	\$420	5	\$90
<b>328 Conservation Crop Rotation</b>									
1	328	Conservation Crop Rotation	Rotate to Perennials (agronomic crops) with foregone income	Acre	\$200	40	\$8,000	1	\$8,240
2	328	Conservation Crop Rotation	Rotate to Perennials (specialty crops) with foregone income	Acre	\$1,000	10	\$10,000	1	\$10,300
3	328	Conservation Crop Rotation	Continuous No-Fallow (agronomic crops)	Acre	\$65	30	\$1,950	1	\$2,010
4	328	Conservation Crop Rotation	Rotate to Perennials (organic crops) with foregone income	Acre	\$1,200	5	\$6,000	1	\$6,180
<b>329 Residue and Tillage Management, No-Till/Strip-Till</b>									
1	329	Residue and Tillage Management, No-Till/Strip-Till	No-Till/Strip-Till	Acre	\$20	90	\$1,800	1	\$1,850
2	329	Residue and Tillage Management, No-Till/Strip-Till	No-Till/Strip-Till (tobacco)	Acre	\$165	20	\$3,300	1	\$3,400
<b>330 Contour Farming</b>									
1	330	Contour Farming	Farming on the Contour	Acre	\$9	25	\$230	5	\$50
<b>332 Contour Buffer Strips</b>									
1	332	Contour Buffer Strips	Native grass buffer strips	Acre	\$325	10	\$3,250	5	\$710
2	332	Contour Buffer Strips	Introduced grass buffer strips	Acre	\$285	10	\$2,850	5	\$620
3	332	Contour Buffer Strips	Pollinator habitat buffer strips	Acre	\$485	2	\$970	5	\$210



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4	332	Contour Buffer Strips	Organic seed buffer strips	Acre	\$310	1	\$310	5	\$70
<b>338 Prescribed Burning</b>									
1	338	Prescribed Burning	Understory Burn	Acre	\$60	40	\$2,400	1	\$2,470
2	338	Prescribed Burning	Site Preparation Burn	Acre	\$60	40	\$2,400	1	\$2,470
3	338	Prescribed Burning	Native Grass Burn	Acre	\$70	15	\$1,050	1	\$1,080
4	338	Prescribed Burning	Prescribed Burning site preparation burn 15 acres or less	Acre	\$45	10	\$450	1	\$460
5	338	Prescribed Burning	Prescribed Burning site preparation burn > 15 ≤ 40 acres	Acre	\$30	25	\$750	1	\$770
6	338	Prescribed Burning	Prescribed Burning site preparation burn > 40 acres	Acre	\$18	50	\$900	1	\$930
7	338	Prescribed Burning	Pres. Burning wildlife habitat mgt. burn 15 acres or less	Acre	\$100	10	\$1,000	1	\$1,030
8	338	Prescribed Burning	Pres. Burning wildlife habitat mgt. burn > 15 ≤ 25 acres	Acre	\$85	20	\$1,700	1	\$1,750
9	338	Prescribed Burning	Pres. Burning wildlife habitat mgt. burn > 25 acres	Acre	\$50	25	\$1,250	1	\$1,290
<b>340 Cover Crop</b>									
1	340	Cover Crop	Soil Protection/Nitrogen Scavenging Cover	Acre	\$100	40	\$4,000	1	\$4,120
2	340	Cover Crop	Nitrogen Fixing Cover	Acre	\$90	40	\$3,600	1	\$3,710
3	340	Cover Crop	Multi-species/multi-function Soil Health Cover	Acre	\$120	40	\$4,800	1	\$4,940
4	340	Cover Crop	Organic Weed Suppression/Water Conservation Cover	Acre	\$140	2	\$280	1	\$290
5	340	Cover Crop	Orchard and Vineyard Cover	Acre	\$75	6	\$450	1	\$460
<b>342 Critical Area Planting</b>									
1	342	Critical Area Planting	Grass/legume mixture-normal tillage	Acre	\$550	1	\$550	10	\$60
2	342	Critical Area Planting	Organic grass/legume mixture-normal tillage	Acre	\$490	1	\$490	10	\$60
3	342	Critical Area Planting	NWSG seeding-normal tillage	Acre	\$500	1	\$500	10	\$60
4	342	Critical Area Planting	Grass/legume mix-moderate grading	Acre	\$1,200	1	\$1,200	10	\$140
5	342	Critical Area Planting	Native seeding-moderate grading	Acre	\$1,140	1	\$1,140	10	\$130
6	342	Critical Area Planting	Grass/legume mix-heavy grading	Acre	\$1,765	1	\$1,770	10	\$210
7	342	Critical Area Planting	Native seeding-heavy grading	Acre	\$1,700	1	\$1,700	10	\$200
8	342	Critical Area Planting	Critical Area Planting with farm equipment (seeding only)	Acre	\$380	1	\$380	10	\$40
9	342	Critical Area Planting	Critical Area Planting with farm equipment	Acre	\$1,250	1	\$1,250	10	\$150
10	342	Critical Area Planting	NWSG along upper slopes, fescue along drainage-ways	Acre	\$270	1	\$270	10	\$30

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<b>345 Residue and Tillage Mgt, Mulch Till</b>									
1	345	Residue and Tillage Mgt, Mulch Till	Basic mulch-till	Acre	\$50	40	\$2,000	1	\$2,060
<b>350 Sediment Basin</b>									
1	350	Sediment Basin	Excavated Basin	Cu.Yd.	\$2.55	1,500	\$3,830	20	\$260
2	350	Sediment Basin	Embankment earthen basin with no pipe	Cu.Yd.	\$2.55	1,500	\$3,830	20	\$260
3	350	Sediment Basin	Embankment earthen basin with pipe	Cu.Yd.	\$5.40	1,500	\$8,100	20	\$540
<b>351 Water Well Decommissioning</b>									
1	351	Water Well Decommissioning	Shallow Well less than 20' deep	LnFt	\$40	15	\$600	20	\$40
2	351	Water Well Decommissioning	Shallow Well greater than 20' deep	LnFt	\$32	30	\$960	20	\$60
3	351	Water Well Decommissioning	Drilled Well (300ft. assumed typical)	LnFt	\$3	300	\$900	20	\$60
<b>355 Well Water Testing</b>									
1	355	Well Water Testing	Basic Water Test (pH, cabonates/bicarbonates, EC, dissolved solids, B, Ci, Ca, Mg, Na, SAR and hardness)	Each	\$50	1	\$50	1	\$50
2	355	Well Water Testing	Specialty Water Test (singular specialized test for a specific pollutant, e.g., nitrates, nitrites, coliforms, pesticides, heavy metals, VOCs, or other less common substances)	Each	\$200	1	\$200	1	\$210
3	355	Well Water Testing	Full Spectrum Test (for a broad range of pollutants, e.g., nitrates, nitrites and coliforms plus pesticides, heavy metals, VOCs, and/or other less common substances)	Each	\$240	1	\$240	1	\$250
<b>356 Dike</b>									
1	356	Dike	Material haul < 1 mile (typical: 1,000Ln.Ft. of 6ft. Height, 8ft. top width and 2ft.H:1ft.V side slopes)	Cu.Yd.	\$6.15	4,500	\$27,680	20	\$1,860
2	356	Dike	Material haul > 1 mile (typical: 1,000Ln.Ft. of 6ft. Height, 8ft. top width and 2ft.H:1ft.V side slopes)	Cu.Yd.	\$6.80	4,500	\$30,600	20	\$2,060
<b>359 Waste Treatment Lagoon</b>									
1	359	Waste Treatment Lagoon	Earthen Lagoon (208' x 260' top dimensions, 13' depth and 1' freeboard; 3:1 inside and outside side slopes assumed typical)	Cu.Ft.	\$0.21	439,440	\$92,300	15	\$7,730
<b>360 Waste Facility Closure</b>									
2	360	Waste Facility Closure	Pump-out & Demolition of a concrete waste storage structure (60ft. diameter, 10ft. deep pit assumed typical)	Cu.Ft.	\$2.65	3,580	\$9,500	15	\$800

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1	360	Waste Facility Closure	Pump-out & Demolition of an earthen waste storage structure (110ft. X 110ft., 8ft. deep embankment or excavated lagoon or pond assumed typical)	Cu.Ft.	\$0.37	63,851	\$23,300	15	\$1,950
<b>362 Diversion</b>									
1	362	Diversion	Earthen Diversion (1cu.yd. earth moved/linear ft. assumed typical)	LnFt	\$2.35	1,000	\$2,400	10	\$280
<b>366 Anaerobic Digester</b>									
1	366	Anaerobic Digester	Small Plug Flow <1000 Animal Unit (AU)	AU	\$710	910	\$646,000	25	\$37,000
2	366	Anaerobic Digester	Medium Plug Flow 1000-2000 AU	AU	\$500	1,750	\$875,000	25	\$50,000
3	366	Anaerobic Digester	Large Plug Flow >2000 AU	AU	\$340	3,920	\$1,333,000	25	\$77,000
4	366	Anaerobic Digester	Small Complete Mix <1000 AU	AU	\$710	1,039	\$738,000	25	\$42,000
5	366	Anaerobic Digester	Medium Complete Mix 1000-2500 AU	AU	\$680	1,890	\$1,285,000	25	\$74,000
6	366	Anaerobic Digester	Large Complete Mix >2,500 AU	AU	\$465	3,220	\$1,497,000	25	\$86,000
7	366	Anaerobic Digester	Covered Lagoon/Holding Pond	AU	\$110	1,000	\$110,000	25	\$6,000
<b>367 Roofs and Covers</b>									
1	367	Roofs and Covers	Post Frame Roof, less than 30ft wide	Sq.Ft.	\$14.00	1,000	\$14,000	10	\$1,640
2	367	Roofs and Covers	Post Frame Roof, 30-60ft wide	Sq.Ft.	\$5.50	4,000	\$22,000	10	\$2,580
3	367	Roofs and Covers	Post Frame Roof, Bedrock Foundation	Sq.Ft.	\$6.80	4,000	\$27,200	10	\$3,190
4	367	Roofs and Covers	Flexible Membrane Cover with Flare (over waste storage or treatment facility)	Sq.Ft.	\$2.30	60,000	\$138,000	10	\$16,180
5	367	Roofs and Covers	Steel Frame and Roof	Sq.Ft.	\$7.00	10,000	\$70,000	10	\$8,210
6	367	Roofs and Covers	Flexible Membrane Roof (over a truss roof)	Sq.Ft.	\$9.00	1,000	\$9,000	10	\$1,060
<b>374 Farmstead Energy Improvement</b>									
1	374	Farmstead Energy Improvement	Ventilation - Exhaust	Each	\$1,200	6	\$7,200	10	\$840
2	374	Farmstead Energy Improvement	Ventilation - HAF	Each	\$200	1	\$200	10	\$20
3	374	Farmstead Energy Improvement	Refrigeration, Plate Cooler	Each	\$4,800	1	\$4,800	10	\$560
4	374	Farmstead Energy Improvement	Refrigeration, Scroll Compressor	Each	\$1,100	1	\$1,100	10	\$130
5	374	Farmstead Energy Improvement	Controller, Variable Speed Drive without motor > 5 HP	Each	\$790	1	\$790	10	\$90
6	374	Farmstead Energy Improvement	Automatic Controller System (electronic controls)	Each	\$1,300	1	\$1,300	10	\$150
7	374	Farmstead Energy Improvement	Motor Upgrade, large > 100 HP	Each	\$22,600	1	\$22,600	10	\$2,650
8	374	Farmstead Energy Improvement	Motor Upgrade, medium 10 - 100 HP	Each	\$6,000	1	\$6,000	10	\$700

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9	374	Farmstead Energy Improvement	Motor Upgrade, small > 1 and < 10 HP	Each	\$800	1	\$800	10	\$90
10	374	Farmstead Energy Improvement	Motor Upgrade, very small ≤ 1 HP	Each	\$480	1	\$480	10	\$60
11	374	Farmstead Energy Improvement	Heating - Radiant Brooder for poultry houses	Each	\$460	6	\$2,760	10	\$320
12	374	Farmstead Energy Improvement	Heating - Radiant Tube for poultry houses	Each	\$1,400	6	\$8,400	10	\$980
13	374	Farmstead Energy Improvement	Heating - Radiant Quad for poultry houses	Each	\$880	6	\$5,280	10	\$620
14	374	Farmstead Energy Improvement	High Efficiency Heating System (Building)	1K BTU/Hr	\$9	750	\$6,800	10	\$800
15	374	Farmstead Energy Improvement	Automated Attic Inlets, Heat Recovery vents	Each	\$150	14	\$2,100	10	\$250
16	374	Farmstead Energy Improvement	Grain dryer	Bu./Hr.	\$90	860	\$77,400	10	\$9,070
17	374	Farmstead Energy Improvement	High Efficiency Heat Exchange System for tobacco barns (80%+ for fuel oil & 88%+ for naural gas and propane must be achieved)	1K BTU/Hr	\$9	1,000	\$9,000	10	\$1,060
18	374	Farmstead Energy Improvement	Tobacco barn motor retrofit (new motor and longer drive belt to get unit outside of barn)	Each	\$790	10	\$7,900	10	\$930
19	374	Farmstead Energy Improvement	Replace inefficient maple syrup evaporator	Sq.Ft.	\$190	5	\$1,000	10	\$120
20	374	Farmstead Energy Improvement	Evaporative Cooling System	Sq.Ft.	\$22	100	\$2,200	10	\$260
<b>378 Pond</b>									
1	378	Pond	Embankment Pond with Drop Inlet Pipe (embankment volume)	Cu.Yds.	\$3.30	3,100	\$10,200	20	\$690
2	378	Pond	Embankment Pond with Hood Inlet Pipe (embankment volume)	Cu.Yds.	\$2.95	3,100	\$9,100	20	\$610
<b>380 Windbreak/Shelterbelt Establishment</b>									
1	380	Windbreak/Shelterbelt Establishment	2-row windbreak, shrubs, machine planted with tubes	Ln.Ft.	\$1.60	500	\$800	15	\$70
2	380	Windbreak/Shelterbelt Establishment	3 or more row windbreak, shrub, machine planted with tubes	Ln.Ft.	\$1.80	500	\$900	15	\$80
3	380	Windbreak/Shelterbelt Establishment	2-row windbreak, trees, machine planted, no tubes	Ln.Ft.	\$0.67	500	\$340	15	\$30
4	380	Windbreak/Shelterbelt Establishment	3 or more tree rows machine planted windbreak, no tubes	Ln.Ft.	\$0.75	500	\$380	15	\$30
<b>381 Silvopasture Establishment</b>									
1	381	Silvopasture Establishment	Commercial thinning, establish native grasses	Acre	\$730	10	\$7,300	15	\$610
2	381	Silvopasture Establishment	Commercial thinning, establish introduced grasses and legume mix	Acre	\$560	10	\$5,600	15	\$470
3	381	Silvopasture Establishment	Establish hardwood trees and native grasses in an open field	Acre	\$1,200	10	\$12,000	15	\$1,010
4	381	Silvopasture Establishment	Establish conifer trees, introduced grasses and legumes in an open field	Acre	\$540	10	\$5,400	15	\$450
5	381	Silvopasture Establishment	Establish hardwood trees in an existing pasture with adequate forage	Acre	\$610	10	\$6,100	15	\$510
6	381	Silvopasture Establishment	Establish conifer trees in an existing pasture with adequate forage	Acre	\$95	10	\$950	15	\$80

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<b>382 Fence</b>									
1	382	Fence	Exclusion, 4-strand high tensile electric (Appalachian region cost estimate includes pro-rated cost of 1 gate and a charger)	Ln.Ft.	\$2.50	1,320	\$3,300	20	\$220
2	382	Fence	Exclusion, mountain site, 4-strand high tensile electric (Appalachian region cost estimate includes pro-rated cost of 1 gate and a charger)	Ln.Ft.	\$3.10	1,320	\$4,090	20	\$270
3	382	Fence	Exclusion, barbed wire: 5-strand (Appalachian region cost estimate includes pro-rated cost of 1 gate)	Ln.Ft.	\$2.65	1,320	\$3,500	20	\$240
4	382	Fence	Exclusion, mountain site, barbed wire: 5-strand (cost estimate includes pro-rated cost of 1 gate)	Ln.Ft.	\$3.20	1,320	\$4,220	20	\$280
5	382	Fence	Interior, 3-strand high tensile electric (Appalachian region cost estimate includes pro-rated cost of 1 gate and a charger)	Ln.Ft.	\$2.00	1,320	\$2,640	20	\$180
6	382	Fence	Interior, mountain site, 3-strand high tensile electric (Appalachian region cost estimate includes pro-rated cost of 1 gate and a charger)	Ln.Ft.	\$2.40	1,320	\$3,170	20	\$210
7	382	Fence	Woven wire for small ruminants, 48" with 2-strands of barbed wire; 1 at the bottom and 1 at the top (Appalachian region cost estimate includes pro-rated cost of 1 gate)	Ln.Ft.	\$3.20	1,320	\$4,220	20	\$280
8	382	Fence	Confinement, 5-strand high tensile w/ posts on 6ft. Centers e.g., around or within heavy use areas (Appalachian region cost estimate includes pro-rated cost of 1 gate)	Ln.Ft.	\$5.50	480	\$2,640	20	\$180
9	382	Fence	Safety, 5ft. Chainlink, e.g., around a waste storage structure (Appalachian region cost estimate includes pro-rated cost of 1 gate)	Ln.Ft.	\$6.70	450	\$3,020	20	\$200
10	382	Fence	1-strand stainless steel electric poly wire (no charger cost)	Ln.Ft.	\$0.20	1,320	\$260	10	\$30
11	382	Fence	1-strand stainless steel electric poly wire (w/ prorated solar charger cost)	Ln.Ft.	\$0.47	1,320	\$620	10	\$70
12	382	Fence	2-strand stainless steel electric poly wire (no charger cost)	Ln.Ft.	\$0.32	1,320	\$420	10	\$50
13	382	Fence	2-strand stainless steel electric poly wire (w/ prorated solar charger cost)	Ln.Ft.	\$0.56	1,320	\$740	10	\$90
14	382	Fence	40" electric netting for small ruminants and/or poultry	Ln.Ft.	\$1.20	660	\$790	15	\$70
<b>386 Field Border</b>									
1	386	Field Border	Native Warm Season Grass Establishment (foregone income included)	Acre	\$500	1	\$500	10	\$60
2	386	Field Border	Introduced Grass/Legume Mixture Establishment (foregone income included)	Acre	\$360	1	\$360	10	\$40
3	386	Field Border	Pollinator Mixture Establishment (foregone income included)	Acre	\$540	1	\$540	10	\$60

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4	386	Field Border	Organic Grass/Legume Mixture Establishment (foregone income included)	Acre	\$410	1	\$410	10	\$50
5	386	Field Border	Native Warm Season Grass Establishment (foregone income not included)	Acre	\$260	1	\$260	10	\$30
6	386	Field Border	Introduced Grass/Legume Mixture Establishment (foregone income not included)	Acre	\$290	1	\$290	10	\$30
7	386	Field Border	Pollinator Mixture Establishment (foregone income not included)	Acre	\$410	1	\$410	10	\$50
8	386	Field Border	Organic Grass/Legume Mixture Establishment (foregone income not included)	Acre	\$300	1	\$300	10	\$40
<b>390 Riparian Herbaceous Buffer</b>									
1	390	Riparian Herbaceous Cover	Native Warm Season Grass and Forbs Establishment (no foregone income)	Acre	\$260	1	\$260	5	\$60
2	390	Riparian Herbaceous Cover	Introduced Grass/Legume & Forb Mixture Establishment (no foregone income)	Acre	\$290	1	\$290	5	\$60
3	390	Riparian Herbaceous Cover	Pollinator Mixture Establishment (no foregone income)	Acre	\$410	1	\$410	5	\$90
<b>391 Riparian Forest Buffer</b>									
1	391	Riparian Forest Buffer	Bare-root, hand planted, conifers, hardwoods and shrubs	Acre	\$725	3	\$2,180	15	\$180
2	391	Riparian Forest Buffer	Bare-root, machine planted, conifers, hardwoods and shrubs	Acre	\$790	3	\$2,370	15	\$200
3	391	Riparian Forest Buffer	Bare-root shrubs, 300 stems per acre, no tubes (12ft. x 12ft. spacing)	Acre	\$500	2	\$1,000	15	\$80
4	391	Riparian Forest Buffer	Bare-root shrubs, 680 stems per acre, no tubes (8ft. x 8ft. Spacing)	Acre	\$780	2	\$1,560	15	\$130
5	391	Riparian Forest Buffer	Bare-root shrubs, 870 stems per acre, no tubes (5ft. x 10ft. Spacing)	Acre	\$910	2	\$1,820	15	\$150
6	391	Riparian Forest Buffer	Bare-root hardwoods with tubes, 110 trees per acre (20ft. x 20ft. Spacing)	Acre	\$770	10	\$7,700	15	\$650
7	391	Riparian Forest Buffer	Bare-root hardwoods with tubes, 300 trees per acre (12ft. x 12ft. Spacing)	Acre	\$1,700	10	\$17,000	15	\$1,420
8	391	Riparian Forest Buffer	110 Trees, Hardwoods w/ tubes and Pines making up to 20% of total trees/acre planted	Acre	\$810	5	\$4,050	15	\$340
9	391	Riparian Forest Buffer	300 Trees, Hardwoods w/ tubes and Pines making up to 20% of total trees/acre planted	Acre	\$1,800	5	\$9,000	15	\$750
10	391	Riparian Forest Buffer	110 Hardwoods & 120 Mixed Shrubs	Acre	\$1,600	3	\$4,800	15	\$400
<b>393 Filter Strip</b>									
1	393	Filter Strip	Native Warm Season Grass Establishment (foregone income included)	Acre	\$370	2	\$740	10	\$90
2	393	Filter Strip	Introduced Grass/Legume Mixture Establishment (foregone income included)	Acre	\$415	2	\$830	10	\$100
3	393	Filter Strip	NWSG Establishment with shaping and grading(foregone income included)	Acre	\$560	2	\$1,120	10	\$130
4	393	Filter Strip	Introduced Grass/Legume Mix. Estab. w/ shaping & grading(foregone income included)	Acre	\$600	2	\$1,200	10	\$140
5	393	Filter Strip	Native Warm Season Grass Establishment (foregone income not included)	Acre	\$260	2	\$520	10	\$60
6	393	Filter Strip	Introduced Grass/Legume Mixture Establishment (foregone income not included)	Acre	\$290	2	\$580	10	\$70
<b>394 Firebreak</b>									



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No. of Scen- ar- ios	Prac- tice Code	Practice Name	Practice Scenario	Units	Estimated Average Cost/Unit	Typical Units Installed	Estimated Total Installation Cost (rounded)	Assumed Practice Lifespan in Years	Estimated Average Annual Cost (amor- tized practice cost) <sup>1/</sup>
1	394	Firebreak	Firebreak Establishment - disked	Ln.Ft.	\$0.10	5,000	\$500	5	\$110
2	394	Firebreak	Firebreak Establishment - constructed w/ medium equipment, flat-medium slopes ( ≤ 15%)	Ln.Ft.	\$0.49	3,000	\$1,470	5	\$320
3	394	Firebreak	Firebreak Establishment - constructed w/ medium equipment, steep slopes ( > 15%)	Ln.Ft.	\$1.40	1,000	\$1,400	5	\$310
4	394	Firebreak	Firebreak Establishment - vegetated	Ln.Ft.	\$0.18	5,000	\$900	5	\$200
5	394	Firebreak	Firebreak Estab. - constructed w/ heavy equipment, dozer mounted fireplow	Ln.Ft.	\$0.28	5,000	\$1,400	5	\$310
<b>395 Stream Habitat Improvement and Management</b>									
1	395	Stream Habitat Improvement and Management	Placement of large wood (logs, root wads, log structures) into a stream channel as habitat components (unit based upon: bankful width x stream reach length)	Acre	\$16,500	1	\$16,500	5	\$3,600
2	395	Stream Habitat Improvement and Management	Placement of individual boulders, boulder clusters, or rock structures in or adjacent to the stream channel as habitat components (unit based upon: bankful width x stream reach length)	Acre	\$16,500	1	\$16,500	5	\$3,600
3	395	Stream Habitat Improvement and Management	Placement of a combination of rock AND wood structures into a stream channel (unit based upon: bankful width x stream reach length)	Acre	\$29,400	1	\$29,400	5	\$6,420
<b>396 Aquatic Organism Passage</b>									
1	396	Aquatic Organism Passage	Blockage removal	Cu.Yds.	\$120	200	\$24,000	5	\$5,240
<b>400 Bivalve Aquaculture Gear and Biofouling Control</b>									
1	400	Bivalve Aquaculture Gear and Biofouling Control	Floating Oyster Bag gear cycling (labor cost only to reduce biofouling; no surplus gear)	Each	\$33	35	\$1,160	1	\$1,190
2	400	Bivalve Aquaculture Gear and Biofouling Control	Clam Net cycling (labor cost only to reduce biofouling; no surplus gear)	Each	\$80	20	\$1,600	1	\$1,650
4	400	Bivalve Aquaculture Gear and Biofouling Control	Oyster Cage cycling (labor cost only to reduce biofouling; no surplus gear) - small	Each	\$60	30	\$1,800	1	\$1,850
5	400	Bivalve Aquaculture Gear and Biofouling Control	Oyster Cage cycling (labor cost only to reduce biofouling; no surplus gear) - medium	Each	\$120	15	\$1,800	1	\$1,850
6	400	Bivalve Aquaculture Gear and Biofouling Control	Oyster Cage cycling (labor cost only to reduce biofouling; no surplus gear) - large	Each	\$170	100	\$17,000	1	\$17,510
<b>410 Grade Stabilization Structure</b>									
1	410	Grade Stabilization Structure	Check dams (unit based on ton of rock riprap installed)	Ton	\$65	126	\$8,190	15	\$690
2	410	Grade Stabilization Structure	Earthen embankment dam w/ principal spillway pipe < or = to 6 Inches	Cu.Yd.	\$4.90	2,000	\$9,800	15	\$820

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3	410	Grade Stabilization Structure	Earthen embankment dam w/ principal spillway pipe > or = to 8 Inches < 12 inches	Cu.Yd.	\$5.80	2,500	\$14,500	15	\$1,210
4	410	Grade Stabilization Structure	Earthen embankment dam w/ principal spillway pipe > 12 inches	Cu.Yd.	\$7.50	2,500	\$18,750	15	\$1,570
5	410	Grade Stabilization Structure	Earthen embankment, soil treatment to stabilize area	Cu.Yd.	\$9.00	2,500	\$22,500	15	\$1,880
6	410	Grade Stabilization Structure	Earthen dry dam w/ pipe drop, i.e., riser and barrel structure constructed using plastic pipe, typically without anti-seep collars (units based on riser weir length x barrel length)	Sq.Ft.	\$25	188	\$4,700	15	\$390
7	410	Grade Stabilization Structure	Earthen dry dam w/ pipe drop, i.e., riser and barrel structure constructed using steel pipe, typically with steel anti-seep collars (units based on riser weir length x barrel length)	Sq.Ft.	\$14.50	940	\$13,630	15	\$1,140
8	410	Grade Stabilization Structure	Weir drop structures (metal or reinforced concrete)	Sq.Ft.	\$90	90	\$8,100	15	\$680
9	410	Grade Stabilization Structure	Rock drop structures held in place w/ galvanized wire, e.g., gabion baskets, fence panels, or "sausage" baskets	Sq.Ft.	\$140	24	\$3,360	15	\$280
10	410	Grade Stabilization Structure	Bioengineered log drop structures consisting of logs, rock riprap and earthfill	Each	\$5,200	1	\$5,200	15	\$440
11	410	Grade Stabilization Structure	Chute structure consisting of rock riprap, pavers, concrete or any other durable material used to stabilized the grade and control erosion in natural or artificial channels	Ton	\$55	33	\$1,820	15	\$150
12	410	Grade Stabilization Structure	Pipe inlet structure consisting of plastic or CMP that does not require any additional appurtenances such as headwalls or risers	Ln.Ft.	\$48	30	\$1,440	15	\$120
<b>412 Grassed Waterway</b>									
1	412	Grassed Waterway	Grassed Waterway < 1,000ft. (500ft. long assumed typical x 12' bottom width = 6,000sq.ft. x 3 to account for total area disturbed during construction that needs seeding = 18,000sq.ft.)	Sq.Ft.	\$0.06	18,000	\$1,040	10	\$120
2	412	Grassed Waterway	Grassed Waterway > 1,000ft. (1,500ft. long assumed typical x 12' bottom width = 18,000sq.ft. x 3 to account for total area disturbed during construction that needs seeding = 54,000sq.ft.)	Sq.Ft.	\$0.05	54,000	\$2,480	10	\$290
<b>422 Hedgerow Planting</b>									
1	422	Hedgerow Planting	Hedgerow Planting with hardwood trees w/ tubes and NWSGs, hand plant	Sq.Ft.	\$0.03	20,000	\$600	15	\$50
2	422	Hedgerow Planting	Hedgerow Planting with hardwood trees w/ tubes and NWSGs, machine plant	Sq.Ft.	\$0.04	20,000	\$800	15	\$70
3	422	Hedgerow Planting	Hedgerow Planting with hardwood trees w/ tubes and introduced grasses, hand plant	Sq.Ft.	\$0.02	28,000	\$560	15	\$50
<b>430 Irrigation Water Convenyance, Corrugated Metal Pipeline</b>									
1	430	Irrigation Water Convenyance, Corrugated Metal Pipeline	Buried irrigation pipe < or = to 2 inch diameter	Ln.Ft.	\$2.60	1,000	\$2,600	20	\$170

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2	430	Irrigation Water Convenyance, Corrugated Metal Pipeline	Buried irrigation pipe > 2 inch and < 6 inch diameter	Ln.Ft.	\$5.10	1,000	\$5,100	20	\$340
3	430	Irrigation Water Convenyance, Corrugated Metal Pipeline	Buried irrigation pipe > 2 6 inch diameter	Ln.Ft.	\$7.80	1,000	\$7,800	20	\$520
4	430	Irrigation Water Convenyance, Corrugated Metal Pipeline	Surface installation of HDPE (iron pipe size & tubing) pipeline, typical size of pipe installed: 1-inch to 4-inch	Ln.Ft.	\$1.50	1,000	\$1,500	20	\$100
5	430	Irrigation Water Convenyance, Corrugated Metal Pipeline	Surface steel - iron pipe size, typical size ranges from 2-inch to 18-inch; and typical scenario size assumed here is 2-inch	Ln.Ft.	\$6.80	1,320	\$8,980	20	\$600
6	430	Irrigation Water Convenyance, Corrugated Metal Pipeline	Surface aluminum irrigation pipe, typical size ranges from 6-inch to 12-inch; and typical scenario size assumed here is 8-inch	Ln.Ft.	\$6.80	660	\$4,490	20	\$300
<b>436 Irrigation Reservoir</b>									
1	436	Irrigation Reservoir	Earthen structure - dugout or embankment	Cu.Yds.	\$3.30	11,350	\$37,460	15	\$3,140
<b>441 Irrigation System, Microirrigation</b>									
1	441	Irrigation System, Microirrigation	Subsurface dripline or drip tape with emitters and media filter (PVC mains and lateral supply lines)	Acre	\$1,800	60	\$108,000	15	\$9,050
2	441	Irrigation System, Microirrigation	Surface PE tubing with emitters and media filter (PVC mains and lateral supply lines)	Acre	\$2,300	60	\$138,000	15	\$11,560
3	441	Irrigation System, Microirrigation	Microjet system with emitters and media filter (PVC mains and lateral supply lines)	Acre	\$2,900	60	\$174,000	15	\$14,580
4	441	Irrigation System, Microirrigation	Micro-irrigation system with surface drip trip tape and media filter < = 5 acres (typically a diversified specialty crop farm installation)	Acre	\$2,500	0.5	\$1,250	15	\$100
5	441	Irrigation System, Microirrigation	Surface micro-irrigation system with screen filter for seasonal high tunnels (30' x 96' assumed typical)	Sq.Ft.	\$0.19	2,880	\$550	15	\$50
<b>442 Irrigation System, Sprinkler</b>									
1	442	Irrigation System-Sprinkler	Irrigation System - Center Pivot Sprinkler	Ln.Ft.	\$70	1,300	\$91,000	15	\$7,620
2	442	Irrigation System-Sprinkler	Retrofit existing Center Pivot Sprinkler with new spray nozzles	Ln.Ft.	\$5	1,300	\$6,500	15	\$540
3	442	Irrigation System-Sprinkler	Linear or lateral move sprinkler system	Ln.Ft.	\$90	1,280	\$115,200	15	\$9,650
4	442	Irrigation System-Sprinkler	Wheel line (aka side roll, wheelmove or lateral roll) with 7ft. diam. wheels	Ln.Ft.	\$16	1,280	\$20,500	15	\$1,720
5	442	Irrigation System-Sprinkler	Solid set sprinkler system	Acre	\$4,500	10	\$45,000	15	\$3,770

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6	442	Irrigation System-Sprinkler	Traveling gun sprinkler system (≤ 2" delivery hose) to apply liquid animal waste from feeding operations	Each	\$8,000	1	\$8,000	15	\$670
7	442	Irrigation System-Sprinkler	Traveling gun sprinkler system (> 2" ≤ 3" delivery hose) to apply liquid animal waste from feeding operations	Each	\$21,800	1	\$21,800	15	\$1,830
8	442	Irrigation System-Sprinkler	Traveling gun sprinkler system (> 3" delivery hose) to apply liquid animal waste from feeding operations	Each	\$43,200	1	\$43,200	15	\$3,620
9	442	Irrigation System-Sprinkler	Portable irrigation system consisting of PE pipe and irrigation PODs with attached sprinklers (will serve 10 acres assumed as typical)	Each	\$240	14	\$3,400	15	\$280
10	442	Irrigation System-Sprinkler	Retrofit existing Center Pivot Sprinkler	Ln.Ft.	\$5	1,550	\$7,800	15	\$650
<b>447 Irrigation System, Tailwater Recovery</b>									
	447	Irrigation Sys.Tailwater Recovery	Irrigation System Tailwater Recovery	LnFt	\$3	1,000	\$3,000	15	\$250
<b>449 Irrigation Water Management</b>									
1	449	Irrigation Water Management	Basic IWM plan preparation	Acre	\$5.80	100	\$600	1	\$620
2	449	Irrigation Water Management	Basic IWM plan implementation < or + 30 acres	Acre	\$20	15	\$300	1	\$310
3	449	Irrigation Water Management	Basic IWM plan implementation > 30 acres	Acre	\$9	50	\$500	1	\$520
<b>457 Mine Shaft and Adit Closing</b>									
1	457	Mine Shaft and Adit Closing	Riprap Closing of a horizontal mine opening	Sq.Ft.	\$60	80	\$4,800	15	\$400
2	457	Mine Shaft and Adit Closing	Bat Grate/Closing of a horizontal mine opening	Sq.Ft.	\$70	80	\$5,600	15	\$470
<b>468 Lined Waterway or Outlet</b>									
1	468	Lined Waterway or Outlet	Rock-lined Waterway or Outlet, 12 inch rock (D100 = 9 inches; velocity ≈ 8cu.ft./sec.)	Sq.Ft.	\$3.70	4,500	\$16,700	15	\$1,400
<b>472 Access Control</b>									
1	472	Access Control	Foregone grazing/lost income from previously grazing woodland area	Acre	\$2.80	15	\$42	1	\$43
2	472	Access Control	Foregone grazing/lost income from previously grazing wetlands, sinkholes or other environmentally sensitive sites	Acre	\$17	1	\$17.00	1	\$18
3	472	Access Control	Foregone grazing/lost income from previously grazing riparian pasture site	Acre	\$25	1	\$25.00	1	\$26
	472	Access Control	Road or trail closure using treated posts and a metal gate	Each	\$630	1	\$630.00	10	\$74
<b>484 Mulching</b>									

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1	484	Mulching	Small grain staw or other natural material for erosion control, moderate soil temperature, water conservation and/or weed suppression, partial coverage either in the rows or between rows	Acre	\$340	1	\$340	1	\$350
2	484	Mulching	Small grain straw or other natural material, all purposes, full coverage	Acre	\$510	1	\$510	1	\$530
3	484	Mulching	Biodegradable erosion control blanket on eroding sites, typically made of coconut coir, wood fiber or straw and covered on both sides with polypropylene netting to control erosion & establish vegetative cover	Sq.Ft.	\$0.20	5,000	\$1,000	1	\$1,030
4	484	Mulching	Tree and/or shrub mats	Each	\$2.25	110	\$250	1	\$260
<b>490 Tree and Shrub Site Preparation</b>									
1	490	Tree and Shrub Site Preparation	Ground Applied Herbicide	Acre	\$75	40	\$3,000	1	\$3,090
2	490	Tree and Shrub Site Preparation	Aerial Applied Herbicide	Acre	\$100	40	\$4,000	1	\$4,120
3	490	Tree and Shrub Site Preparation	Hand Applied Herbicide	Acre	\$190	10	\$1,900	1	\$1,960
4	490	Tree and Shrub Site Preparation	Rolling Drum Chopper	Acre	\$130	40	\$5,200	1	\$5,360
5	490	Tree and Shrub Site Preparation	Shear and Pile dozer or other heavy equip. to remove undesirable vegetation	Acre	\$170	40	\$6,800	1	\$7,000
6	490	Tree and Shrub Site Preparation	Mow and Spray, non-forest site	Acre	\$90	40	\$3,600	1	\$3,710
7	490	Tree and Shrub Site Preparation	Mow and Disk, non-forest site	Acre	\$90	40	\$3,600	1	\$3,710
9	490	Tree and Shrub Site Preparation	Furrow or Scalp and spray on open land sites	Acre	\$120	20	\$2,400	1	\$2,470
10	490	Tree and Shrub Site Preparation	Spray, Furrow or Scalp and spray again on open land sites	Acre	\$140	20	\$2,800	1	\$2,880
11	490	Tree and Shrub Site Preparation	Hand scalp 3ft. circles	Acre	\$250	1	\$250	1	\$260
12	490	Tree and Shrub Site Preparation	Forestry mulching, ≤ 6" dbh woody material	Acre	\$550	15	\$8,300	1	\$8,550
13	490	Tree and Shrub Site Preparation	Forestry mulching, > 6" ≤ 10" dbh woody material	Acre	\$770	15	\$11,600	1	\$11,950
<b>511 Forage Harvest Management</b>									
1	511	Forage Harvest Management	Record keeping and forage tissue testing	Acre	\$2.60	30	\$80	1	\$80
<b>512 Forage and Biomass Planting</b>									
1	512	Forage and Biomass Planting	Native Warm Season Grass Establishment	Acre	\$250	30	\$7,500	5	\$1,640
2	512	Forage and Biomass Planting	Native Warm Season Grass Establishment, mined land	Acre	\$530	30	\$15,900	5	\$3,470
3	512	Forage and Biomass Planting	Native Warm Season Grass Mix Establishment	Acre	\$390	30	\$11,700	5	\$2,550
4	512	Forage and Biomass Planting	Native Warm Season Grass Mix Establishment, mined land	Acre	\$675	30	\$20,250	5	\$4,420

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5	512	Forage and Biomass Planting	Cool Season Grass/Legume Mix Establishment	Acre	\$440	30	\$13,200	5	\$2,880
6	512	Forage and Biomass Planting	Renovation with Legumes, drilled with some soil amendments	Acre	\$150	10	\$1,500	5	\$330
7	512	Forage and Biomass Planting	Renovation with Legumes, drilled, no soil amendments	Acre	\$30	10	\$300	5	\$70
8	512	Forage and Biomass Planting	Renovation with Legumes, broadcast "frost-seeded" with some soil amendments	Acre	\$50	10	\$500	5	\$110
9	512	Forage and Biomass Planting	Renovation with Legumes, broadcast "frost-seeded" without soil amendments	Acre	\$15	10	\$150	5	\$30
10	512	Forage and Biomass Planting	Annuals used to convert from endophyte infected fescue to desired cool season grass/legume mixture (practice is not complete until the perennial is established)	Acre	\$580	30	\$17,400	5	\$3,800
11	512	Forage and Biomass Planting	Annuals used to convert from endophyte infected fescue, degraded perennial grasses or a monoculture or no grass present to desired native warm season grass/legume mixture (practice is not complete until the perennial is established)	Acre	\$540	30	\$16,200	5	\$3,540
<b>516 Livestock Pipeline</b>									
1	516	Livestock Pipeline	Buried pipeline 1" PVC or HDPE	Ln.Ft.	\$2.55	1,000	\$2,550	20	\$170
2	516	Livestock Pipeline	Buried pipeline 2" PVC or HDPE	Ln.Ft.	\$2.75	1,000	\$2,750	20	\$180
3	516	Livestock Pipeline	Buried pipeline in rocky terrain (any size)	Ln.Ft.	\$5.25	500	\$2,630	20	\$180
4	516	Livestock Pipeline	Quick Connect Couplers	Each	\$55	10	\$550	20	\$40
5	516	Livestock Pipeline	Rural water connection to public system in steep topography <b>with</b> a reduced pressure zone device (RPZ)	Each	\$1,700	1	\$1,700	20	\$110
6	516	Livestock Pipeline	Rural water connection to public system in steep topography <b>without</b> a reduced pressure zone device (RPZ)	Each	\$1,300	1	\$1,300	20	\$90
7	516	Livestock Pipeline	Freeze-proof hydrant with 10ft. of PVC supply pipe assumed as typical to get water from source (distribution on farm requires one of the above scenarios)	Each	\$170	1	\$170	20	\$10
<b>521 Pond Sealing or Lining</b>									
1	521A	Pond Sealing or Lining	Flexible Membrane - uncovered without liner drainage or venting	Sq.Yd.	\$10	2,420	\$24,200	20	\$1,630
2	521A	Pond Sealing or Lining	Flexible Membrane - uncovered without liner drainage or venting	Sq.Ft.	\$1.11	21,780	\$24,200	20	\$1,630
3	521A	Pond Sealing or Lining	Flexible Membrane - uncovered with liner drainage and venting	Sq.Yd.	\$12.95	2,420	\$31,300	20	\$2,100
4	521A	Pond Sealing or Lining	Flexible Membrane - uncovered with liner drainage and venting	Sq.Ft.	\$1.44	21,780	\$31,300	20	\$2,100
5	521A	Pond Sealing or Lining	Flexible Membrane - covered without liner drainage or venting	Sq.Yd.	\$11.20	2,420	\$27,100	20	\$1,820
6	521A	Pond Sealing or Lining	Flexible Membrane - covered without liner drainage or venting	Sq.Ft.	\$1.24	21,780	\$27,100	20	\$1,820



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7	521A	Pond Sealing or Lining	Flexible Membrane - covered with liner drainage and venting	Sq.Yd.	\$14.20	2,420	\$34,400	20	\$2,310
8	521A	Pond Sealing or Lining	Flexible Membrane - covered with liner drainage and venting	Sq.Ft.	\$1.58	21,780	\$34,400	20	\$2,310
9	521C	Pond Sealing or Lining	Bentonite clay, 1ft. thick with 0.5ft. soil cover	Ton	\$780	131	\$102,200	15	\$8,560
10	521C	Pond Sealing or Lining	Bentonite clay (50lb. bag), 1ft. thick with 0.5ft. soil cover	50lb. bag	\$19.50	5,227	\$101,900	15	\$8,540
11	521C	Pond Sealing or Lining	Bentonite clay, 1ft. thick with 0.5ft. soil cover	Sq.Ft.	\$2.35	43,560	\$102,200	15	\$8,560
12	521C	Pond Sealing or Lining	Bentonite clay, 1ft. thick, no soil cover	Ton	\$740	131	\$96,900	15	\$8,120
13	521C	Pond Sealing or Lining	Bentonite clay (50lb. bag), 1ft. thick, no soil cover	50lb. bag	\$18.50	5,227	\$96,700	15	\$8,100
14	521C	Pond Sealing or Lining	Bentonite clay, 1ft. thick, no soil cover	Sq.Ft.	\$2.22	43,560	\$96,900	15	\$8,120
15	521D	Pond Sealing or Lining	Compacted clay, 1ft. thick with 0.5ft. soil cover, < or = 1 mile haul	Cu.Yd.	\$10.40	2,420	\$25,200	15	\$2,110
16	521D	Pond Sealing or Lining	Compacted clay, 1ft. thick with 0.5ft. soil cover, > 1 mile haul (approx. 5 mile haul assumed typical)	Cu.Yd.	\$11.55	2,420	\$28,000	15	\$2,350
527 Karst Sinkhole Treatment									
1	527	Karst Sinkhole Treatment	Excavate and Dispose of Debris	Each	\$840	1	\$840	10	\$100
528 Prescribed Grazing									
1	528	Prescribed Grazing	Basic Grazing Plan implementation (minimum of 4 paddocks)	Acre	\$16	60	\$960	1	\$990
2	528	Prescribed Grazing	Intensive Grazing Plan implementation (minimum of 5 paddocks)	Acre	\$27	60	\$1,620	1	\$1,670
533 Pumping Plant									
1	533	Pumping Plant	Ram pump	Each	\$1,500	1	\$1,500	15	\$130
2	533	Pumping Plant	Pasture/nose pump	Each	\$690	1	\$690	15	\$60
3	533	Pumping Plant	Electrical pump ≤ 1.5 HP	Each	\$2,450	1	\$2,450	15	\$210
4	533	Pumping Plant	Electrical pump > 1.5 HP < or = 5 HP	Brake HP	\$1,200	4	\$4,800	15	\$400
5	533	Pumping Plant	Electrical pump > 5 HP < or = 10 HP	Brake HP	\$700	8	\$5,600	15	\$470
6	533	Pumping Plant	Electrical pump > 10 HP < or = 20 HP	Brake HP	\$710	15	\$10,650	15	\$890
7	533	Pumping Plant	Electrical pump > 20 HP	Brake HP	\$325	50	\$16,250	15	\$1,360
8	533	Pumping Plant	Variable frequency drive (doesn't include motor)	Brake HP	\$230	50	\$11,500	15	\$960
9	533	Pumping Plant	Tractor power take-off pump	Brake HP	\$180	60	\$10,800	15	\$900
10	533	Pumping Plant	Wind turbine powered pump	Each	\$6,800	1	\$6,800	15	\$570
11	533	Pumping Plant	Solar powered pump, 2 panel 24V system	Each	\$2,600	1	\$2,600	15	\$220

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12	533	Pumping Plant	Solar powered pump, 4 panel 48V system	Each	\$4,300	1	\$4,300	15	\$360
13	533	Pumping Plant	Electric sump pump ≤ 5 Hp	Brake HP	\$650	3	\$1,950	15	\$160
<b>554 Drainage Water Management</b>									
1	554	Drainage Water Management	Drainage water management, management and record keeping cost/control structure	Each	\$85	5	\$430	1	\$440
<b>558 Roof Runoff Structure</b>									
1	558	Roof Runoff Structure	Gutters, downspouts and splashguards	Ln.Ft.	\$5.70	180	\$1,030	15	\$90
2	558	Roof Runoff Structure	Fascia boards, gutters, downspouts and splashguards	Ln.Ft.	\$8.80	180	\$1,580	15	\$130
3	558	Roof Runoff Structure	Gutters, downspouts and a storage tank (1,500gal. tank assumed as typical)	Ln.Ft.	\$15.50	180	\$2,790	15	\$230
4	558	Roof Runoff Structure	Concrete curb or parabolic channel with controlled outlet	Ln.Ft.	\$13.80	200	\$2,760	15	\$230
5	558	Roof Runoff Structure	Trench drain with controlled outlet	Ln.Ft.	\$14.60	200	\$2,920	15	\$240
6	558	Roof Runoff Structure	Drip pad along dripline of a building with controlled outlet	Ln.Ft.	\$3.95	200	\$790	15	\$70
7	558	Roof Runoff Structure	Roof runoff storage tank with controlled overflow outlet (1,500gal. tank assumed as typical)	Gal.	\$1.30	1,500	\$1,950	15	\$160
<b>560 Access Road</b>									
1	560	Access Road	Rehabilitation of and existing gravel road: 1-Lane, 14ft. wide, 2ft. shoulders, no trees cleared, 6" gravel base over geotextile fabric	Ln.Ft.	\$7.40	500	\$3,700	10	\$430
1	560	Access Road	New construction: 1-Lane, 14ft. wide, 2ft. shoulders, no trees cleared, 6" gravel base over geotextile fabric	Ln.Ft.	\$18	500	\$9,000	10	\$1,060
<b>561 Heavy Use Area Protection</b>									
1	561	Heavy Use Area Protection	Geotextile and 6" of gravel	Sq.Ft.	\$2.00	1,624	\$3,250	10	\$380
2	561	Heavy Use Area Protection	5" Reinforced concrete slab over a 4" of gravel base (no curb, no gravel around it)	Sq.Ft.	\$3.50	630	\$2,210	10	\$260
3	561	Heavy Use Area Protection	5" Concrete slab with welded-wire or fiber reinforcement over a 4" of gravel base (curb included, but no gravel around it)	Sq.Ft.	\$4.60	576	\$2,650	10	\$310
4	561	Heavy Use Area Protection	5" concrete slab, fiber reinforced over a 4" of gravel base (no curb nor gravel around it)	Sq.Ft.	\$4.50	4,000	\$18,000	10	\$2,110
6	561	Heavy Use Area Protection	12" tall x 8" wide reinforced concrete curb retrofit of an existing concrete slab	Ln.Ft.	\$15	280	\$4,200	10	\$490
7	561	Heavy Use Area Protection	5" Reinforced concrete slab with a curb over a 4" gravel base, with a gravel transition area at entrance and exit of a livestock facility	Sq.Ft.	\$6.50	4,000	\$26,000	10	\$3,050
<b>574 Spring Development</b>									

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1	574	Spring Development	Filter fabric, drainline, 2ft.wide x 3ft. high compacted clay cutoff wall and spring box water collection system, small (< 8ft. long cutoff wall)	Each	\$1,270	1	\$1,270	20	\$90
2	574	Spring Development	Filter fabric, drainline, 6inch wide x 3ft. high concrete cutoff wall and spring box water collection system, small (< 8ft. long cutoff wall)	Each	\$1,430	1	\$1,430	20	\$100
3	574	Spring Development	Filter fabric, drainline, 6inch wide x 4ft. high compacted clay cutoff wall, spring box and 1,550gal. tank water collection and storage system, medium (> 8ft. and < 15ft. long cutoff wall)	Each	\$2,800	1	\$2,800	20	\$190
4	574	Spring Development	Filter fabric, drainline, 6inch wide x 4ft. high concrete cutoff wall and spring box water collection system, large (> 15ft. and < 25ft. long cutoff wall)	Each	\$3,900	1	\$3,900	20	\$260
<b>575 Trails and Walkways</b>									
1	575	Trails and Walkways	Geotextile and 6" of gravel travel lane	Sq.Ft.	\$1.50	3,600	\$5,400	15	\$450
2	575	Trails and Walkways	5" Concrete over 4" gravel base travel lane	Sq.Ft.	\$3.20	3,600	\$11,520	15	\$960
<b>578 Stream Crossing</b>									
1	578	Stream Crossing	Bridge consisting of site preparation, dewatering, acquiring and installing abutments, girders, decking w/ necessary hardware, backfilling abutments, and armoring with geotextile and riprap	Sq.Ft.	\$50	252	\$12,600	10	\$1,480
2	578	Stream Crossing	Low-water crossing with hard armor, includes site preparation, dewatering, acquiring and installing gravel or geotextile with rock riprap or cast in place concrete on channel bottom and approaches	Sq.Ft.	\$8.80	936	\$8,240	10	\$970
3	578	Stream Crossing	Geotextile and gravel graded crossing, small ≤ 50' long	Sq.Ft.	\$2.30	700	\$1,610	10	\$190
4	578	Stream Crossing	Geotextile and gravel graded crossing > 50' long	Sq.Ft.	\$2.00	1,400	\$2,800	10	\$330
5	578	Stream Crossing	Geotextile and gravel graded crossing with concrete access aprons (approx. 75')	SqFt	\$4.25	1,050	\$4,460	10	\$520
6	578	Stream Crossing	Graded crossing with a culvert, 30" diam. pipe x 40' with rock riprap headwalls	SqFt	\$4.50	1,050	\$4,730	10	\$550
7	578	Stream Crossing	Low-water crossing with geocells or similar with gravel or concrete final surface	Sq.Ft.	\$8.45	936	\$7,910	10	\$930
<b>580 Streambank &amp; Shoreline Protection</b>									
1	580	Streambank and Shoreline Protection	Bioengineered using shaping and non-woody vegetation	Sq.Ft.	\$0.80	20,000	\$16,000	20	\$1,080
2			Bioengineered using shaping and woody vegetation (willows assumed as typical)	Sq.Ft.	\$2.30	20,000	\$46,000	20	\$3,090
3	580	Streambank & Shoreline Protection	Bioengineered living shoreline stabilization with shaping, coir logs and tidal plugs	SqFt	\$4.30	10,000	\$43,000	20	\$2,890
4	580	Streambank & Shoreline Protection	Bioengineered using shaping, riprap at toe of slope and vegetation on the embankment	SqFt	\$4.05	2,500	\$10,130	20	\$680

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5	580	Streambank & Shoreline Protection	Bioengineering using shaping, grading, and native trees and shrubs	SqFt	\$6.10	2,500	\$15,250	20	\$1,030
6	580	Streambank & Shoreline Protection	Engineered structural measures using shaping, riprap and/or concrete blocks or gabions (assumes 1,000ft. x 15ft. x 6ft. high bank with 3:1 side-slopes; rock goes up 5ft. and is 3ft. thick)	Ton	\$60	2,750	\$165,000	20	\$11,090
7	580	Streambank & Shoreline Protection	Engineered structural measures to construct bankfull benches and using boulders and/or log cluster (with boulders) to construct in-stream structures such as J-Hook, Vanes, Cross Vanes or Combo Root Wad/Log Vane and J-Hook structures	Ton	\$65	412	\$26,780	20	\$1,800
<b>585 Stripcropping</b>									
1	585	Stripcropping	Layout alternating strips of erosion susceptible and erosion resistant crops for water erosion control	Acre	\$4.75	25	\$120	5	\$30
2	585	Stripcropping	Layout alternating strips of erosion susceptible and erosion resistant crops for wind erosion control	Acre	\$2.00	80	\$160	5	\$30
3	585	Stripcropping	Layout and establish 60' crop strips alternating with cool season grass/legume mix strips	Acre	\$270	25	\$6,750	5	\$1,470
<b>587 Structure for Water Control</b>									
1	587	Structure for Water Control	HDPE water level control structure (24" x 40ft. pipe), unit based on pipe diameter (in.) x pipe length (ft.) = diameter inch ft.; < 30" diameter	Diam.In.Ft.	\$1.92	960	\$1,840	20	\$120
2	587	Structure for Water Control	CMP water level control structure (24" x 40ft. pipe), unit based on pipe diameter (in.) x pipe length (ft.) = diameter inch ft.; < 30" diameter	Diam.In.Ft.	\$2.19	960	\$2,100	20	\$140
3	587	Structure for Water Control	SCH80 PVC water level control structure (16" outlet x 50ft. pipe and 20" flashboard riser), unit based on flashboard weir/riser length (in.) x barrel pipe length (ft.) = diameter inch ft.	Diam.In.Ft.	\$3.30	1,000	\$3,300	20	\$220
4	587	Structure for Water Control	Metal water level control structure (30" outlet x 50ft. pipe and 36" flashboard riser), unit based on flashboard weir/riser length (in.) x barrel pipe length (ft.) = diameter inch ft.	Diam.In.Ft.	\$3.70	1,800	\$6,660	20	\$450
5	587	Structure for Water Control	Metal water level control structure (30" outlet x 50ft. pipe and 42" flashboard riser), unit based on flashboard weir/riser length (in.) x barrel pipe length (ft.) = diameter inch ft.	Diam.In.Ft.	\$5.10	2,100	\$10,710	20	\$720
6	587	Structure for Water Control	Metal water level control structure w/ single headwall on either the upstream or downstream section (30" outlet x 50ft. pipe and 42" flashboard riser), unit based on flashboard weir/riser length (in.) x barrel pipe length (ft.) = diameter inch ft.	Diam.In.Ft.	\$8.20	2,100	\$17,220	20	\$1,160

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7	587	Structure for Water Control	Metal water level control structure w/ double headwall with one on the upstream and one on the downstream section (30" x 50ft. pipe and 42" flashboard riser), unit based on flashboard weir/riser length (in.) x barrel pipe length (ft.) = diameter inch ft.	Diam.In.Ft.	\$11.50	2,100	\$24,150	20	\$1,620
8	587	Structure for Water Control	Culvert, ≤ 30" x 40' HDPE pipe (24" pipe assumed as typical)	Diam.In.Ft.	\$2.00	960	\$1,920	20	\$130
9	587	Structure for Water Control	Culvert, ≤ 30" x 40' CMP pipe (24" pipe assumed as typical)	Diam.In.Ft.	\$2.25	960	\$2,160	20	\$150
10	587	Structure for Water Control	Water level control, ditch filling earthwork	Cu.Yd.	\$5.70	250	\$1,430	20	\$100
<b>590 Nutrient Management</b>									
1	590	Nutrient Management	Basic Nutrient Mgmt., fertilizer only (level B fertilizer)	Acre	\$20	20	\$400	1	\$410
2	590	Nutrient Management	Basic Nutrient Mgmt., manure history (level B manure)	Acre	\$26	20	\$520	1	\$540
3	590	Nutrient Management	Enhanced nutrient management (level C)	Acre	\$31	40	\$1,240	1	\$1,280
4	590	Nutrient Management	Diversified speciality crop farm nutrient management plan implementation	Each	\$100	1	\$100	1	\$100
5	590	Nutrient Management	Adaptive nutrient management (small test strips on-farm)	Each	\$1,900	1	\$1,900	1	\$1,960
<b>591 Amendments for the Treatment of Agricultural Waste</b>									
1	591	Amendments for the Treatment of Agricultural Waste	Litter Amendments for Water Quality, Partially Treated Brood Chamber (4 flocks in a 42' x 500'; 20,000sq.ft. poultry house assumed typical)	1Ksq.ft.	\$26	84	\$2,180	1	\$2,250
<b>595 Integrated Pest Management</b>									
1	595	Integrated Pest Management	Basic IPM for one resource concern	Acre	\$17	40	\$680	1	\$700
2	595	Integrated Pest Management	Basic IPM for > one resource concern	Acre	\$23	40	\$920	1	\$950
3	595	Integrated Pest Management	Advanced IPM for all identified resource concerns	Acre	\$34	40	\$1,360	1	\$1,400
4	595	Integrated Pest Management	Basic IPM for fruit and vegetable production with one resource concern	Acre	\$90	10	\$900	1	\$930
5	595	Integrated Pest Management	Basic IPM for fruit and vegetable production with > resource concern	Acre	\$120	10	\$1,200	1	\$1,240
6	595	Integrated Pest Management	Advanced IPM for fruit and vegetable production for all identified resource concerns	Acre	\$180	10	\$1,800	1	\$1,850
7	595	Integrated Pest Management	Basic IPM for orchards and vineyards with one resource concern	Acre	\$120	10	\$1,200	1	\$1,240
8	595	Integrated Pest Management	Basic IPM for orchards and vineyards with > resource concern	Acre	\$180	10	\$1,800	1	\$1,850
9	595	Integrated Pest Management	Advanced IPM for orchards and vineyards for all identified resource concerns	Acre	\$275	10	\$2,750	1	\$2,830
10	595	Integrated Pest Management	Basic IPM for small farm/diversified systems one resource concern	Each	\$570	1	\$570	1	\$590
11	595	Integrated Pest Management	Basic IPM for small farm/diversified systems > one resource concern	Each	\$725	1	\$730	1	\$750
12	595	Integrated Pest Management	Advanced IPM for small farm/diversified systems > one resource concern	Each	\$1,100	1	\$1,100	1	\$1,130

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<b>600 Terrace</b>									
1	600	Terrace	Broad-based level terraces (2.5ft. height, and 5:1 front and back slopes assumed typical)	Ln.Ft.	\$1.90	2,500	\$4,800	10	\$560
2	600	Terrace	Flat-channel terraces (2.5ft. height, and 8:1 front and back slopes assumed typical)	Ln.Ft.	\$3.10	2,500	\$7,800	10	\$910
3	600	Terrace	Grass-backed terraces (2.5ft. height, and one relatively flat (5:1) slope and one steep (2:1) slope assumed typical)	Ln.Ft.	\$1.10	2,500	\$2,800	10	\$330
4	600	Terrace	Narrow-based ( $\leq$ 8% slope, 2.5ft. height, and approximately 2:1 front and back slopes assumed typical)	Ln.Ft.	\$1.35	2,500	\$3,400	10	\$400
5	600	Terrace	Narrow-based ( $>$ 8% slope, 2.5ft. height, and approximately 2:1 front and back slopes assumed typical)	Ln.Ft.	\$1.45	2,500	\$3,600	10	\$420
<b>606 Subsurface Drain</b>									
1	606	Subsurface Drain	Below ground installation of HDPE/corrugated plastic pipe, single-wall, $\leq$ 6 inch diameter	Ln.Ft.	\$3.60	2,000	\$7,200	20	\$480
2	606	Subsurface Drain	Below ground installation of HDPE/corrugated plastic pipe with a sand envelope, single-wall, $\leq$ 6 inch diameter	Ln.Ft.	\$5.50	2,000	\$11,000	20	\$740
3	606	Subsurface Drain	Below ground installation of HDPE/corrugated plastic pipe, single-wall, $>$ 6 inch diameter	Ln.Ft.	\$6.25	1,000	\$6,300	20	\$420
4	606	Subsurface Drain	Below ground installation of HDPE/corrugated plastic pipe, double-wall, $>$ 6 inch diameter	Ln.Ft.	\$14.00	1,000	\$14,000	20	\$940
<b>612 Tree and Shrub Establishment</b>									
1	612	Tree and Shrub Establishment	Plug conifers, hand plant (350 trees/acre assumed)	Acre	\$150	40	\$6,000	15	\$500
2	612	Tree and Shrub Establishment	Bare root conifers, hand plant (450 trees/acre assumed)	Acre	\$75	40	\$3,000	15	\$250
3	612	Tree and Shrub Establishment	Bare root conifers, machine plant (450 trees/acre assumed)	Acre	\$80	40	\$3,200	15	\$270
4	612	Tree and Shrub Establishment	Bare root hardwoods, hand plant (435 trees/acre assumed), no tubes	Acre	\$240	10	\$2,400	15	\$200
5	612	Tree and Shrub Establishment	Bare root hardwoods, machine plant (300 trees/acre assumed), no tubes	Acre	\$230	10	\$2,300	15	\$190
6	612	Tree and Shrub Establishment	Bare root shrubs, hand plant (870 shrubs/acre assumed), no tubes	Acre	\$1,770	1	\$900	15	\$80
7	612	Tree and Shrub Establishment	Bare root hardwoods, hand plant (110 trees/acre assumed), with tubes	Acre	\$545	10	\$5,500	15	\$460
8			Bare root hardwoods, hand plant (150 trees/acre assumed), with tubes	Acre	\$690	10	\$6,900	15	\$580
9	612	Tree and Shrub Establishment	Bare root hardwoods, hand plant (300 trees/acre assumed), with tubes	Acre	\$1,500	10	\$15,000	15	\$1,260
10	612	Tree and Shrub Establishment	Longleaf Pine Tree Planting (hand planting)	Acre	\$175	10	\$1,800	15	\$150
11	612	Tree and Shrub Establishment	Shortleaf Pine Tree Planting (hand planting)	Acre	\$50	15	\$800	15	\$70
12	612	Tree and Shrub Establishment	Mixed Shrub Seedlings high diversity (870 shrubs/acre), no tubes	Acre	\$1,530	15	\$23,000	15	\$1,930



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13	612	Tree and Shrub Establishment	Mixed Shrub Seedlings low diversity (870 shrubs/acre), no tubes	Acre	\$1,040	15	\$15,600	15	\$1,310
14	612	Tree and Shrub Establishment	110 Hardwoods & 120 Mixed Shrubs	Acre	\$1,650	3	\$5,000	15	\$420
<b>614 Watering Facility</b>									
1	614	Watering Facility	Converted heavy equipment tire, 8ft. Diameter assumed	Each	\$1,630	1	\$1,600	20	\$110
2	614	Watering Facility	2-Hole - Freeze Proof Trough (includes gravel and concrete pad)	Each	\$1,300	1	\$1,300	20	\$90
3	614	Watering Facility	4-Hole - Freeze Proof Trough (includes gravel and concrete pad)	Each	\$1,600	1	\$1,600	20	\$110
4	614	Watering Facility	100-500gallon tanks (includes gravel and concrete pad)	Gal.	\$3.45	300	\$1,000	20	\$70
5	614	Watering Facility	500-1,000gallon tanks (includes gravel and concrete pad)	Each	\$1,320	1	\$1,300	20	\$90
6	614	Watering Facility	1,000-1,500gallon tanks (includes gravel and concrete pad)	Each	\$1,725	1	\$1,700	20	\$110
7	614	Watering Facility	> 1,500gallon tanks (includes gravel and concrete pad)	Each	\$2,100	1	\$2,100	20	\$140
8	614	Watering Facility	Livestock watering ramp (rock riprap, 6" gravel and geotextile fabric)	Sq.Ft.	\$1.85	640	\$1,180	20	\$80
9	614	Watering Facility	Livestock watering ramp (rock riprap, 6" gravel, geocell and geotextile fabric)	Sq.Ft.	\$4.60	640	\$2,940	20	\$200
10	614	Watering Facility	Small Portable troughs for rotational grazing (typically 50-100 gallon capacity made of plastic, heavy duty rubber or galvanized sheet metal)	Each	\$120	1	\$120	20	\$10
<b>620 Underground Outlet</b>									
1	620	Underground Outlet	Pipe, no inlet, 6 inches or less	Ln.Ft.	\$5.00	300	\$1,500	20	\$100
2	620	Underground Outlet	Pipe, drop inlet, > 6 inches or < 12 inches	Ln.Ft.	\$9.50	300	\$2,850	20	\$190
3	620	Underground Outlet	Pipe, drop inlet, > 12 inches	Ln.Ft.	\$14.50	300	\$4,350	20	\$290
4	620	Underground Outlet	Pipe, riser, 6 inches or less	Ln.Ft.	\$5.20	300	\$1,560	20	\$100
5	620	Underground Outlet	Pipe, riser, > 6 inches or < 12 inches	Ln.Ft.	\$9.45	300	\$2,835	20	\$190
6	620	Underground Outlet	Pipe, riser, > 12 inches	Ln.Ft.	\$16.90	300	\$5,070	20	\$340
7	620	Underground Outlet	Pipe, drop inlet, 6 inches or less	Ln.Ft.	\$10.70	500	\$5,350	20	\$360
8	620	Underground Outlet	Pipe, drop inlet, > 6 inches or < 12 inches	Ln.Ft.	\$11.75	300	\$3,525	20	\$240
<b>629 Waste Treatment</b>									
1	629	Waste Treatment	Milking Parlor Waste Treatment System with Dosing System and Bed	Gal./day	\$47.00	500	\$23,500	10	\$2,750
2	629	Waste Treatment	Milking Parlor Waste Treatment System with Dosing System only	Gal./day	\$22.00	500	\$11,000	10	\$1,290
<b>632 Waste Separation Facility</b>									
1	632	Waste Separation Facility	Mechanical manure/solids/nutrients separator for liquid manure - small ( ≤ 100 hd.)	Each	\$33,000	1	\$33,000	15	\$2,760

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2	632	Waste Separation Facility	Mechanical Manure/Solids Separator for liquid manure - med.-large ( > 100 hd.)	Each	\$55,000	1	\$55,000	15	\$4,610
3	632	Waste Separation Facility	Passive manure/solids settling lane/earthen	Cu.Ft.	\$0.45	30,000	\$13,500	15	\$1,130
4	632	Waste Separation Facility	Passive manure/solids settling lane/concrete	Cu.Ft.	\$4.90	5,000	\$24,500	15	\$2,050
5	632	Waste Separation Facility	Passive manure/solids settling lane/concrete basin with multiple cells	Cu.Ft.	\$3.15	26,250	\$82,688	12	\$8,310
6	632	Waste Separation Facility	Passive manure/solids settling basin/concrete basin	Cu.Ft.	\$6.60	1,800	\$11,880	15	\$1,000
<b>633 Waste Recycling (formerly Waste Utilization)</b>									
1	633	Waste Recycling	Dry poultry spreading	Acre	\$37	20	\$740	1	\$760
2	633	Waste Recycling	Liquid dairy spreading	Acre	\$14	20	\$280	1	\$290
<b>634 Waste Transfer</b>									
1	634	Waste Transfer	Wastewater reception pit, less than 1,000 gal.	Gal.	\$7.00	1,000	\$7,000	15	\$590
2	634	Waste Transfer	Wastewater reception pit, 1,000 to 5,000 gal.	Gal.	\$3.00	4,300	\$12,900	15	\$1,080
3	634	Waste Transfer	Wastewater reception pit, 5,000 gal. and larger	Gal.	\$2.30	8,600	\$19,780	15	\$1,660
4	634	Waste Transfer	Medium sized wastewater reception pit with 6 inch conduit transfer pipe to waste storage pond	Gal.	\$3.85	4,300	\$16,555	15	\$1,390
5	634	Waste Transfer	Large reception pit, 8 inch pipe to treatment, plus 6 inch pipe to storage.	Gal.	\$3.00	8,600	\$25,800	15	\$2,160
6	634	Waste Transfer	Concrete Channel (slab, curb and footing on each side of slab)	Sq.Ft.	\$10.30	1,200	\$12,360	15	\$1,040
7	634	Waste Transfer	Concrete Channel, push-off wall at pond and safety gate	Sq.Ft.	\$12.80	1,200	\$15,360	15	\$1,290
8	634	Waste Transfer	Concrete channel (slab with curb) to push off to medium sized wastewater reception pit	Sq.Ft.	\$17.50	1,200	\$21,000	15	\$1,760
9	634	Waste Transfer	Concrete channel (slab with curb) to push off to medium sized collection basin where waste is transferred to wastewater reception pit with a 6" low pressure pipe	Sq.Ft.	\$21.00	1,200	\$25,200	15	\$2,110
10	634	Waste Transfer	Small Flush System, less than 1000 gallon per flush to reception pit, 8 inch pipe to storage.	Gal.	\$13.25	1,000	\$13,250	15	\$1,110
11	634	Waste Transfer	Wastewater Flush Transfer System, Pipes only, 12 inch diameter	Ln.Ft.	\$55.00	300	\$16,500	15	\$1,380
12	634	Waste Transfer	Hopper gravity inlet, 24 inch diameter HDPE pipeline, to waste storage facility	Ln.Ft.	\$110	80	\$8,800	15	\$740
13	634	Waste Transfer	30 inch HDPE conduit, gravity flow, from an existing inlet structure to site of treatment or storage	Ln.Ft.	\$80	150	\$12,000	15	\$1,010
14	634	Waste Transfer	12 inch diameter, Low pressure flow, PVC conduit	Ln.Ft.	\$40	300	\$12,000	15	\$1,010
15	634	Waste Transfer	10 inch diameter, Low pressure flow PVC pipeline, from waste storage pond to land application site	Ln.Ft.	\$22.00	1,000	\$22,000	15	\$1,840
16	634	Waste Transfer	6 inch diameter, Pressure flow PVC pipeline, from waste storage pond to land application site	Ln.Ft.	\$12.90	1,000	\$12,900	15	\$1,080

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17	634	Waste Transfer	Agitator, small, mixing contents of a reception pit that is no more than than 10 ft. deep	Each	\$11,650	1	\$11,650	15	\$980
18	634	Waste Transfer	Agitator, medium, mixing contents of a reception pit that is 10 ft to 15 ft. deep	Each	\$18,000	1	\$18,000	15	\$1,510
19	634	Waste Transfer	Agitator, large, mixing contents of a reception pit that is over 15 ft. deep	Each	\$26,000	1	\$26,000	15	\$2,180
<b>635 Vegetated Treatment Area</b>									
1	635	Vegetated Treatment Area	Herbaceous species planting only on a site that meets VTA CPS and permit requirements	Acre	\$600	0.5	\$300	10	\$40
2	635	Vegetated Treatment Area	Earth work and herbaceous species planting	Acre	\$1,450	0.5	\$725	10	\$80
<b>638 Water and Sediment Control Basin</b>									
1	638	Water and Sediment Control Basin	Earthen structure - dugout or embankment - earth work only, ≤ 200cu.yds. earth moved	Cu.Yd.	\$3.20	200	\$640	10	\$80
2	638	Water and Sediment Control Basin	Earthen structure - dugout or embankment - earth work only, > 200cu.yds. earth moved	Cu.Yd.	\$2.60	700	\$1,820	10	\$210
3	638	Water and Sediment Control Basin	Earthen structure - dugout or embankment - earth work only, > 200cu.yds. earth moved, topsoil removed, stockpiled and replaced following construction	Cu.Yd.	\$2.90	700	\$2,030	10	\$240
4	638	Water and Sediment Control Basin	Earthen structure - dugout or embankment with water level control (pipe and riser)	No	\$2,690	1	\$2,700	10	\$320
<b>642 Water Well</b>									
1	642	Water Well	Bored well and casing	Ln.Ft.	\$21	400	\$8,400	20	\$560
<b>643 Restoration and Management of Rare and Declining Habitats</b>									
1	643	Restoration and Management of Rare and Declining Habitats	Habitat monitoring and management, Low Intensity & Complexity, no foregone income	Acre	\$3.50	160	\$600	1	\$620
2	643	Restoration and Management of Rare and Declining Habitats	Oyster reef restoration using planted oyster shells	Acre	\$7,600	1	\$7,600	1	\$7,830
3	643	Restoration and Management of Rare and Declining Habitats	Oyster reef restoration at site with some exisitng cultch using planted oyster shells	Acre	\$3,700	1	\$3,700	1	\$3,810
<b>644 Wetland Wildlife Habitat Management</b>									
1	644	Wetland Wildlife Habitat Management	Habitat Monitoring and Management, Medium Intensity and Complexity	Acre	\$13	160	\$2,080	1	\$2,140
2	644	Wetland Wildlife Habitat Management	Development of Shallow Micro-Topographic Features with Normal Farming Equipment.	Acre	\$40	20	\$800	1	\$820
3	644	Wetland Wildlife Habitat Management	Development of Deep Micro-Topographic Features with Heavy Equipment.	Acre	\$110	20	\$2,200	1	\$2,270
4	644	Wetland Wildlife Habitat Management	Seasonal Water Management for Wildlife	Cu.Yd.	\$6.00	250	\$1,500	1	\$1,550
5	644	Wetland Wildlife Habitat Management	Water level control structure (pipe and riser)	Each	\$2,750	1	\$2,750	1	\$2,830
<b>645 Upland Wildlife Habitat Management</b>									

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No. of Scen- ar- ios	Prac- tice Code	Practice Name	Practice Scenario	Units	Estimated Average Cost/Unit	Typical Units Installed	Estimated Total Installation Cost (rounded)	Assumed Practice Lifespan in Years	Estimated Average Annual Cost (amor- tized practice cost) <sup>1/</sup>
1	645	Upland Wildlife Habitat Management	Habitat Monitoring and Management, Medium Intensity and Complexity	Acre	\$13	160	\$2,080	1	\$2,140
2	645	Upland Wildlife Habitat Management	Development of Shallow Micro-Topographic Features with Normal Farming Equipment.	Acre	\$40	20	\$800	1	\$820
3	645	Upland Wildlife Habitat Management	Development of Deep Micro-Topographic Features with Heavy Equipment.	Acre	\$110	20	\$2,200	1	\$2,270
<b>646 Shallow Water Development and Management</b>									
1	646	Shallow Water Development and Management	Earth fill Embankment structure, < 2.5' high	Cu.Yd.	\$3.20	800	\$2,560	5	\$560
2	646	Shallow Water Development and Management	Earthen structure, dugout	Cu.Yd.	\$3.20	1,600	\$5,120	5	\$1,120
3	646	Shallow Water Development and Management	Earthen structure - dugout or embankment with water level control (pipe and riser)	No	\$2,750	1	\$2,750	5	\$600
4	646	Shallow Water Development and Management	Shallow water management (water level management, low intensity)	Acre	\$65	1	\$70	5	\$20
5	646	Shallow Water Development and Management	Shallow water management (water level management, high intensity)	Acre	\$165	1	\$170	5	\$40
<b>647 Early Successional Habitat Development and Management</b>									
1	647	Management	Habitat mowing	Acre	\$40	2	\$80	1	\$80
1	647	Early Successional Habitat Development and Management	Habitat disking	Acre	\$25	2	\$50	1	\$50
2	647	Early Successional Habitat Development and Management	Early Successional Habitat Forest Opening (patch clearcuts of 2 acres or less assumed typical)	Acre	\$210	2	\$420	5	\$90
3	647	Early Successional Habitat Development and Management	Edge Feathering (cutback borders between forest cover and open land to create a mosaic of cover from open early successional to shrub to mature forest cover)	Acre	\$490	2	\$980	5	\$210
4	647	Early Successional Habitat Development and Management	Rolling Drum Chopper (typically followed by prescribed burning)	Acre	\$130	10	\$1,300	5	\$280
5	647	Early Success. Hab. Development/Management	Herbicide Application - woody species treatment	Acre	\$100	15	\$1,500	1	\$1,550

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6	647	Early Success. Hab. Development/Management	Herbicide Application - woody species spot treatment (typical setting for this scenario is at the edge of crop fields, the edge of pastures, the edge of forests, and in odd areas on agricultural operations where early suc. hab. can be created and/or maintained)	Acre	\$50	2	\$100	1	\$100
7	647	Early Success. Hab. Development/Management	Herbicide Application - non-woody species treatment	Acre	\$22	2	\$40	1	\$40
8	647	Early Success. Hab. Development/Management	Fescue conversion to early successional habitat (assumes fall treatment and spring follow-up treatment typical to kill fescue)	Acre	\$70	15	\$1,050	1	\$1,080
9	647	Early Success. Hab. Development/Management	Forestry mulching, ≤ 6" dbh woody material	Acre	\$550	15	\$8,250	1	\$8,500
<b>649 Wildlife Habitat Structures</b>									
1	649	Structures for Wildlife	Nesting/habitat box for birds, pollinators, bats, etc., small, no pole (directly mounted to a tree or other support feature)	Each	\$40	3	\$100	5	\$20
2	649	Structures for Wildlife	Nesting/habitat box for birds, pollinators, bats, etc., small, with treated wood pole (6" x 8' pole assumed)	Each	\$60	3	\$180	5	\$40
3	649	Structures for Wildlife	Nesting/habitat box for birds, pollinators, bats, etc., large, no pole (directly mounted to a tree or other support feature)	Each	\$80	3	\$200	5	\$40
4	649	Structures for Wildlife	Nesting/habitat box for birds, pollinators, bats, etc., large, with galvanized metal pole (1.25" x 10' pole assumed) and a predator guard	Each	\$350	3	\$1,050	5	\$230
5	649	Structures for Wildlife	Escape ramp toetrofit an existing watering trough/tank/reservoir to reduce wildlife mortality and maintain water quality within the watering facility	Each	\$33	6	\$200	5	\$40
6	649	Structures for Wildlife	Fence markers, vinyl markers to increase visibility/reduce mortality (every 3' assumed typical)	Ln.Ft.	\$0.12	1,320	\$160	10	\$20
7	649	Structures for Wildlife	Brush-pile, small (10' x 20' composed of interlocking tree limbs < 12" diameter)	Each	\$33	1	\$30	5	\$10
8	649	Structures for Wildlife	Brush-pile, large (30' x 50' composed of interlocking tree limbs < 12" diameter)	Each	\$130	1	\$130	5	\$30
9	649	Structures for Wildlife	Rock structure, small (7' long x 5' wide x 3' high), comparable functions to a brush-pile, but more enduring made from 4"-8" riprap; approx. 5 tons of rock/pile;	Each	\$540	1	\$540	25	\$30
<b>654 Road/Trail/Landing Closure and Treatment</b>									
1	654	Road/Trail/Landing Closure and Treatment	Road/Trail Abandonment/Rehabilitation (Light)	Ln.Ft.	\$3.00	500	\$1,500	10	\$180
2	654	Road/Trail/Landing Closure and Treatment	Road/Trail removal and restoration (Vegetative)	Ln.Ft.	\$2.65	500	\$1,330	10	\$160

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<b>657 Wetland Restoration</b>									
1	657	Wetland Restoration	Depression Sediment Removal and Ditch Plug (10 acres of wetlands; 15 acre tract)	Tract Acres	\$1,140	15	\$17,100	15	\$1,430
2	657	Wetland Restoration	Crush tile/fill existing ditch (1 acre of wetlands, 20 acre tract)	Cu.Yd.	\$4.80	165	\$790	15	\$70
3	657	Wetland Restoration	Fill shallow drainage ditches, no macro features (40 acre farmed wetland typical)	Cu.Yd.	\$5.65	887	\$5,010	15	\$420
<b>658 Wetland Creation</b>									
1	658	Wetland Creation	Wetland Creation, Wildlife Pond (10 acre wetland is created)	Cu.Yd.	\$2.10	16,133	\$33,880	15	\$2,840
2	658	Wetland Creation	Ephemeral Pools	Sq.Ft.	\$0.40	2,500	\$1,000	15	\$80
3	658	Wetland Creation	Shallow Water Areas	Wetland ac.	\$3,700	0.50	\$1,850	15	\$150
4	658	Wetland Creation	Earthen Embankment Impoundment	Ln.Ft.	\$33	250	\$8,250	15	\$690
5	658	Wetland Creation	Low Earthen Embankment (2ft. high or less)	Ln.Ft.	\$17	250	\$4,350	15	\$360
6	658	Wetland Creation	Excavated shallow seasonal pools for amphibians	Sq.Ft.	\$0.32	11,000	\$3,520	15	\$290
7	658	Wetland Creation	Excavated seasonal pools w/ liners for amphibians	Sq.Ft.	\$0.41	11,400	\$4,670	15	\$390
8	658	Wetland Creation	Excavated seasonal pools in non-hydric soil sites	Sq.Ft.	\$0.44	5,500	\$2,420	15	\$200
<b>658 Wetland Enhancement</b>									
1	659	Wetland Enhancement	Depression Sediment Removal and Ditch Plug (10 acres of wetlands)	Cu.Yd.	\$2	8,067	\$17,340	15	\$1,450
2	659	Wetland Enhancement	Excavated seasonal pools in hydric soil sites	SqFt	\$0.50	5,500	\$2,750	15	\$230
<b>660 Tree and Shrub Pruning</b>									
1	660	Tree and Shrub Pruning	Hand shearing of Christmas trees	Acre	\$265	10	\$2,650	10	\$310
<b>666 Forest Stand Improvement</b>									
1	666	Forest Stand Improvement	Pre-commercial thinning, hand tools	Acre	\$175	20	\$3,500	10	\$410
2	666	Forest Stand Improvement	Pre-commercial thinning, mechanical, hardwoods	Acre	\$135	20	\$2,700	10	\$320
3	666	Forest Stand Improvement	Pre-commercial thinning, mechanical,pines	Acre	\$90	40	\$3,600	10	\$420
4	666	Forest Stand Improvement	Chemical, single-stem treatment, spot/partial-coverage ground application	Acre	\$290	10	\$2,900	10	\$340
5	666	Forest Stand Improvement	Chemical, full-coverage ground application on pines	Acre	\$55	40	\$2,200	10	\$260
6	666	Forest Stand Improvement	Chemical, full-coverage aerial application on pines	Acre	\$80	40	\$3,200	10	\$380
7	666	Forest Stand Improvement	Chemical, mid-rotation ground applied herbicide application on hardwoods	Acre	\$85	25	\$2,130	10	\$250
8	666	Forest Stand Improvement	Competition Control, Mechanical, Light Equipment	Acre	\$100	10	\$1,000	10	\$120
9	666	Forest Stand Improvement	Competition Control, Mechanical, Heavy Equipment	Acre	\$350	10	\$3,500	10	\$410



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10	666	Forest Stand Improvement	Patch clearcuts of 2 acres or less for wildlife habitat creation	Acre	\$210	10	\$2,100	10	\$250
11	666	Forest Stand Improvement	Thinning for Health and Wildlife (combination of hand tool and chemical treatments)	Acre	\$320	10	\$3,200	10	\$380
670 Lighting System Improvement									
1	670	Lighting System Improvement	Lighting - LED bulbs	Each	\$21	125	\$2,600	10	\$300
2	670	Lighting System Improvement	Lighting - Pulse-Start Metal Halide fixtures	Each	\$22	6	\$130	10	\$20
3	670	Lighting System Improvement	Lighting - LED high bay lighting fixtures	Each	\$1,800	6	\$10,800	10	\$1,270
4	670	Lighting System Improvement	Lighting - LED dusk to dawn flood lighting fixtures	Each	\$1,000	3	\$3,000	10	\$350
5	670	Lighting System Improvement	Lighting - Linear LED fixtures	Each	\$16	6	\$100	10	\$10
6	670	Lighting System Improvement	Automatic electronic controls for existing manually controlled agricultural lighting system	Each	\$870	1	\$870	10	\$100
672 Building Envelope Improvement									
1	672	Building Envelope Improvement	Building Envelope - Attic Insulation (minimum R-7)	Sq.Ft.	\$0.70	20,000	\$14,000	10	\$1,640
2	672	Building Envelope Improvement	Building Envelope - Wall Insulation (closed cell spray foam, min. 1" thick to achieve R-7)	Sq.Ft.	\$1.70	5,770	\$9,800	10	\$1,150
3	672	Building Envelope Improvement	Building Envelope - Wall Insulation (fiberglass batts, min. 3.5" thick to achieve R-11)	Sq.Ft.	\$1.50	5,770	\$8,700	10	\$1,020
4	672	Building Envelope Improvement	Building Envelope - Wall Insulation (vapor barrier, plywood or OSB interior sheathing and 3.5" fiberglass batts to achieve R-11)	Sq.Ft.	\$1.50	5,770	\$8,700	10	\$1,020
5	672	Building Envelope Improvement	Building Envelope - Sealant (leaks in walls, gables, ceilings, etc.)	Ln.Ft.	\$1.50	2,400	\$3,600	10	\$420
6	672	Building Envelope Improvement	Building Envelope - Thermal blankets, insulated curtains and screens for greenhouses	Sq.Ft.	\$1.90	25,000	\$47,500	10	\$5,570
7	672	Building Envelope Improvement	Insulated curtains and/or sidewalls for poultry houses	Sq.Ft.	\$2.70	300	\$800	10	\$90
8	672	Building Envelope Improvement	Greenhouse - Insulate Unglazed Walls	Sq.Ft.	\$0.30	25,000	\$7,500	10	\$880
798 Seasonal High Tunnel for Crops									
1	798	Seasonal High Tunnel for Crops	Quonset-style (arched roof) hoop houses for specialty crops (30' x 72' assumed typical)	Sq.Ft.	\$3.80	2,160	\$8,210	4	\$2,210
2	798	Seasonal High Tunnel for Crops	Gothic-style (peaked roof) hoop houses for specialty crops (30' x 72' assumed typical)	Sq.Ft.	\$4.90	2,160	\$10,580	4	\$2,850